

# ENVIRONMENTAL ASSESSMENT BOARD



## ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

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VOLUME: 182

DATE: Wednesday, January 20, 1993

BEFORE:


HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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ENVIRONMENTAL ASSESSMENT BOARD  
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,  
R.S.O. 1980, c. 140, as amended, and Regulations  
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro  
consisting of a program in respect of activities  
associated with meeting future electricity  
requirements in Ontario.

Held on the 5th Floor, 2200  
Yonge Street, Toronto, Ontario,  
Wednesday, the 20th day of January,  
1993, commencing at 9:00 a.m.

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VOLUME 182  
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B E F O R E :

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DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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1 ---Upon commencing at 9:02 a.m.

2 THE REGISTRAR: Please come to order.

3 This hearing is now in session. Please be seated.

4 THE CHAIRMAN: Mr. Rosenberg?

5 MR. ROSENBERG: Thank you, sir.

6 AMIR SHALABY,  
7 PAUL JONATHAN BURKE,  
8 BRIAN PAUL WILLIAM DALZIEL,  
9 JOHN KENNETH SNELSON; Resumed.

10 CROSS-EXAMINATION BY MR. ROSENBERG:

11 Q. Mr. Chairman and Panel members, I  
12 would like to start with Exhibit No. 3, and compare  
13 Exhibit No. 3 to the overheads which were distributed  
14 for this panel, and in particular, chart 6.2 of the  
15 overheads, and I believe that's page 7, and page 11-3  
16 of Exhibit 3, and at page 11-3, figure 11-3.

17 Mr. Burke, I will start with you. Let's  
18 begin with page 7 of Panel 11 overheads, it's a chart,  
19 6.26, and it's entitled Primary Peak Uncertainty Band.  
20 If you could just help me with actual figures, and if  
21 this isn't the appropriate chart maybe you can turn my  
22 attention to the appropriate chart.

23 Where would the actuals for 1992 be found  
24 on chart 6.2?

25 MR. BURKE: A. The actual was not on 6.2  
because it was a forecast for 1992 at the time.

1 Q. Given that 1992 is now completed,  
2 could you estimate on this chart where the actual would  
3 be?

4 A. I have an estimated actual for -  
5 well, for system peak it probably is the actual, as  
6 close as it will ever be - for December 1992,  
7 weather-corrected, of 22,165 megawatts.

8 Q. So that would be approximately where  
9 one of the -- there is a series of boxes above the  
10 diamonds, that would be about the second box?

11 A. Let me see here. The forecast  
12 plotted as the median for 1992, and that is the square  
13 boxes line - and that should be "median" not "medium"  
14 as it says on page 7 - the value for 1992 was 22,690  
15 megawatts. So there is about a 500 megawatt difference  
16 between the actual and the block line. And I don't  
17 know on that chart, half a gigawatt would be a very  
18 small difference.

19 Q. Now, looking at the actual, let's  
20 look at the forecast. The 1992 median forecast, is  
21 that the same number that would have appeared in the  
22 original DSP filing that's Exhibit 3, or is that from  
23 Exhibit 452, or is that a new number for 796?

24 A. The forecast that is labelled Median  
25 1992 was a forecast produced in October of 1992 for

1 Exhibit 796.

2 Q. I would like now to turn your  
3 attention to Exhibit 11 -- or, excuse me, Exhibit 3,  
4 page 11-3, figure 11-3, and try and compare in broad  
5 terms, not at a detailed level, but in broad terms what  
6 you have described the required supply peak power  
7 demand forecast in 1989. Do you have that chart in  
8 front of you?

9 A. Yes, I do.

10 Q. And it appears to my untrained eye  
11 that in terms of the lower bandwidth, that your  
12 forecast in 1992 is not -- excuse me, the 1992 actuals  
13 fall within the probability bands identified in figure  
14 11-3; is that correct?

15 A. I don't think there are any  
16 probability bands on figure 11-3. If you want the  
17 uncertainty band for the primary load forecast, it's on  
18 page 8 of Exhibit 937, but in numerical terms it's in  
19 figure 9-3.

20 Q. Figure 9-3?

21 A. Yes.

22 THE CHAIRMAN: I am reading correctly,  
23 you are reading the lower, 11-3 is the lower end of the  
24 band?

25 MR. ROSENBERG: Yes. But I think I may



1 have misinterpreted.

2 Q. So let's go to Exhibit 9-3 -- excuse  
3 me, figure 9-3 in Exhibit 3.

4 MR. BURKE: A. Yes.

5 Q. And the lower there is 22.7; is that  
6 correct?

7 A. Yes. But now we are talking 20  
8 minute January peak and the figure I gave you was for  
9 December peak.

10 The January peak demand in 1992 was 23.7  
11 gigawatts.

12 Q. And you expect the January peak for  
13 1993 to be approximately the same, that is 23.7?

14 A. Well, there is a forecast of that at  
15 the end of attachment C. In Appendix 1 primary 20  
16 minute is expected to be 23.1 gigawatts.

17 Q. So January 1993 you expect to be  
18 23.1?

19 A. Yes.

20 Q. Now, Mr. Burke, there has been a lot  
21 of discussion on the record in this panel about death  
22 spirals and disaster scenarios. I am going to get to  
23 that in a minute, and I am going to deal with it in two  
24 ways, dealing with what you perceive to be the actual  
25 problem and then deal with what appears to be a public

1 perception regarding the matter. But would you agree  
2 with me that in 1989 you forecast certain primary load  
3 forecasts, and that in fact in 1993 it appears that you  
4 are within your forecast from 1989?

5 A. Yes, that's what is indicated on --  
6 within the range of the 80 per cent confidence band  
7 forecast in 1989, that's what is indicated on page 8 of  
8 Exhibit 937, where we plot the current median against  
9 the DSP bandwidth.

10 Now, I think when this plot was prepared  
11 we did not plot the actual value for '92 here.

12 Q. Now, would it be correct to  
13 characterize the lower bandwidth as in 1989 you would  
14 have assumed that to be a low probability event but  
15 still within the realm of possibility?

16 A. The interpretation of the bandwidth,  
17 we went into that in great detail in Panel 1, briefly  
18 you would expect 10 per cent of the forecasts we make  
19 to fall outside and below the lower bound. So, roughly  
20 speaking, one in 10 years you would expect the forecast  
21 to fall below the lower bound.

22 Q. And in fact, you are just above the  
23 lower bound right now?

24 A. Yes. And as I mentioned earlier, the  
25 economic events and the also the energy price events,

1 but just the economic events alone of the last couple  
2 of years are quite singular events and have not  
3 occurred in Ontario for about 40, 50 years.

4 [9:13 a.m.]

5 Q. Now I want to turn to the effect or  
6 the cause and effects related to being at your current  
7 primary load numbers in two ways: one, the actual  
8 problems associated with it and what I call the public  
9 perception of that; and then relate it all back to the  
10 planning process.

11 If you could turn to - I seem to have  
12 lost my own copy - Dr. de Bever's evidence. And for  
13 the panel it's Exhibit 993. It's a document entitled  
14 "Electricity Pricing in Ontario: The Macro Effects and  
15 Distributional Impacts from Current Policies and  
16 Possible Alternatives".

17 Now, Mr. Burke, this is the prefiled  
18 evidence of the Consumers' Association of Canada that  
19 we intend to use when we are allowed to present  
20 evidence to the hearing. But I would like to turn your  
21 attention now just to pages 31 and 32 of Dr. de Bever's  
22 evidence.

23 First, Mr. Burke, just for the record you  
24 are aware of who Dr. de Bever is?

25 A. Yes.

1 Q. And you are aware of his reputation?

2 A. Yes.

3 Q. And you consider him to be a  
4 qualified expert in economic matters?

5 A. Yes.

6 Q. Now at page 31 and 32 of his  
7 evidence, he describes the chapter as revaluation of  
8 Ontario Hydro's assets. I would like to turn your  
9 attention to page 32 of that document and I would like  
10 to refer you to basically from the second paragraph  
11 down to the bottom of the page 1.

12 And to give you the punch-line, because  
13 it's no secret what his evidence is, at the very bottom  
14 of the page he says:

15 If Hydro were a private company, the  
16 process would stop here. Since net  
17 equity will probably turn out to be  
18 negative, the company would declare  
19 insolvency and the assets would pass into  
20 other hands.

21 So you would agree with me that Dr. de  
22 Bever takes the position that it's possible as of today  
23 that in clinical terms Ontario Hydro may be insolvent?

24 A. Well, I --

25 Q. I'm not asking you to agree or

1 disagree with this conclusion but just to recognize  
2 that that is one conclusion from his paper.

3 A. That is the conclusion he comes to in  
4 his paper, yes.

5 Q. Okay. Now going to the top of the  
6 page, second paragraph, Dr. de Bever sets out an  
7 analysis. He says:

8 When private companies get into  
9 difficulty, they usually, one,  
10 re-evaluate their prospects in the market  
11 in which they operate; two, abandon  
12 practices, assets or product lines that  
13 have outlived their usefulness; and,  
14 three, adjust shareholders' equity for  
15 the difference.

16 I would like to look at Exhibit 796 for a  
17 moment and just ask you with respect to 796 - and this  
18 may be for Mr. Snelson or for yourself - whether you  
19 consider the effect of 796 to be that Hydro has  
20 re-evaluated their prospects in the market in which  
21 they operate and have abandoned practices, assets or  
22 product lines that have outlived their usefulness?

23 A. Let me take the first part of that,  
24 and Mr. Snelson can deal with the second part, that is  
25 re-evaluated their prospects in the marketplace. I



1 think the load forecast, the primary load forecast is  
2 essentially a forecast of the prospects of Ontario  
3 Hydro in the marketplace.

4 It is important to recognize in that  
5 forecast that while it has been reduced by 7 per cent  
6 relative to the DSP Update document of a year ago in  
7 the short term, the forecast by the year 2002 converges  
8 quite closely to the previous forecast. I think what  
9 is quite important in that, which may be a very simple  
10 point, but in the context of a quick reading of what  
11 Dr. de Bever has done here, is that there is still  
12 growth, considerable growth reflected in the  
13 marketplace for electricity.

14 It is lower in the short term than before  
15 but it is not as if we are forecasting as a median case  
16 negative growth. I think that bears quite critically  
17 on what Dr. de Bever has done here.

18 But, yes, we have re-evaluated the  
19 situation and we have seen that market forces are doing  
20 many of the things that demand management programs were  
21 expected to do for us, especially in the fuel switching  
22 area. And so we have in the sense of part of our  
23 program re-evaluated how that should proceed. And  
24 although the details of how we will deliver demand  
25 managements in the long term have yet to be delivered,

1 the load forecast suggests that the program component  
2 of that will be smaller especially in the fuel  
3 switching area in response to our re-evaluation of  
4 market prospects.

5 Q. Now, I know Mr. Snelson may add to  
6 it. I would like, Mr. Burke, just to take you to page  
7 20 of Dr. de Bever's evidence and then I will ask Mr.  
8 Snelson to comment as well.

9 But at page 20 of Dr. de Bever's  
10 evidence, he sets out reasons for Ontario Hydro's  
11 financial predicament. And you say that Dr. de Bever  
12 may have not taken into account growth or potential  
13 growth in his conclusion regarding insolvency; correct?  
14 That is one factor that you just identified?

15 A. Well, I think you are now getting  
16 into the details of Dr. de Bever's thesis.

17 Q. Fair enough. If you go to the bottom  
18 of the page, last two paragraphs, he says:

19 Some blame optimistic projections of  
20 future demand for the problem. That is  
21 always easier with 20/20 hindsight, not  
22 entirely fair. Hydro should have been  
23 less enamoured with mega projects and  
24 would have focused more on operational  
25 efficiency, NUGs or smaller incremental

1 capacity units with shorter lead times.

2 Yet some of the economic and financial  
3 factors that hit Hydro were simply  
4 impossible to forecast accurately.

5 And he goes on to say in the last  
6 paragraph:

7 It is possible that political  
8 pressures and wishful thinking are now  
9 imparting a negative bias to the  
10 long-term forecast. Demand growth may  
11 still turn out to be far greater than it  
12 appears to be at the moment.

13 Dr. de Bever then goes on to say that  
14 maintaining flexibility to deal with the eventuality  
15 seems desirable.

16 So would you agree with those comments by  
17 Dr. de Bever?

18 A. I really find it hard to agree that  
19 my forecast is wishful thinking. [Laughter.]

20 Q. Well, would you agree, Mr. Burke --  
21 that's fair comment. Would you agree that flexibility  
22 seems to be the most desirable end point in a planning  
23 process that has a 25-year term?

24 A. I certainly agree with that, and the  
25 load forecast has, as we have already turned up this

1 morning, indicated that there is uncertainty in the  
2 load forecast right from the beginning. If anything,  
3 the confidence bands have widened through  
4 methodological changes in the course of this hearing.  
5 I really do prefer to think of my forecast as a range  
6 forecast, and the logical response to that is  
7 flexibility.

8 We have not changed the long-term primary  
9 load forecast of Ontario Hydro significantly in Exhibit  
10 796 versus the DSP Update, and so not only do I have a  
11 difficulty with the wishful thinking part, I have a  
12 difficulty with the now imparting a negative bias  
13 because whatever views there are have, in the long  
14 term, not changed. We have reallocated demand in large  
15 measure between programs and market-driven aspects but  
16 we have not changed the long-term prospect for demand  
17 in Ontario.

18 It also has not changed very much, as I  
19 pointed out, and I say very much relative to the  
20 uncertainty band we originally specified in 1989; that  
21 is, the demand forecast in the long term -- while 10  
22 per cent may sound like a lot, is down 10 per cent in  
23 the long term, the bandwidth is now considered to be  
24 for that period plus or minus 20 per cent.

25 So while we have made changes, those

1 changes are not enormous. And they affect not so much  
2 the economic prospects of the province, which I believe  
3 perhaps underlies most of Dr. de Bever's analysis, but  
4 the change in relative prices of fuels.

5 [9:25 a.m.]

6 Q. Now, Mr. Snelson, did you have  
7 anything to add to Mr. Burke's testimony?

8 MR. SNELSON: A. I presume that you are  
9 asking me to comment on the latter part of that  
10 statement about that when the private companies get  
11 into difficulty they usually re-evaluate their  
12 prospects and abandon practices, assets or product  
13 lines that have outlived their usefulness.

14 Q. Mr. Burke suggested that you may wish  
15 to add to it. I don't want to limit in any way your  
16 comments. If you have comments about my question,  
17 please give them, otherwise I will move on.

18 A. Well, in that respect we have told  
19 you in Exhibit 796 and in our direct evidence that we  
20 have made changes to the operation of the company, that  
21 we have changed our long-term plans, that we have  
22 decided not to operate some of our existing generating  
23 plant, and that we have adjusted demand management,  
24 non-utility generation programs, and that that process  
25 is not complete and is continuing.



1                   So more or less we have done many of  
2       those things. It's a very general question, but we  
3       have done a lot of those things.

4                   Q. And, Mr. Snelson, the other question  
5       is this: Dr. de Bever has come to the conclusion that  
6       Ontario Hydro may, as of today or current time, be  
7       insolvent in clinical financial terms. Do you agree or  
8       disagree with that proposition?

9                   A. I think that's a very speculative  
10      kind of statement. The analysis here seems to be if  
11      Ontario Hydro was operating as a private company, and  
12      Ontario Hydro is not a private company; Ontario Hydro  
13      is a public utility, and there are processes for  
14      valuation of assets and for the recovery of costs,  
15      which are quite different to those of a private  
16      corporation.

17                  Q. Now, looking at Dr. de Bever's  
18      analysis, in the third paragraph he defines what he  
19      believes the value of an asset is, and this is the  
20      third page on page 32. He says:

21                   The value of an asset is the present  
22                   value of the net income it is expected to  
23                   generate over its lifetime. In the case  
24                   of generation equipment, that should  
25                   include operational characteristics but



1                   also the social cost assigned with  
2                   negatives associated with its use.

3                   Mr. Burke or Mr. Snelson, would you agree  
4           that that's a proper characterization of what the value  
5           of an asset is to Ontario Hydro?

6                   A.   The value of Ontario Hydro's assets  
7           is part of the consideration of the Ontario Energy  
8           Board with respect to rate setting, and is conducted  
9           according to accounting principles that are generally  
10          accepted for public corporations, public utilities.

11                  Q.   And using that definition, have you  
12          come to any conclusion as to the solvency of Ontario  
13          Hydro?

14                  MR. B. CAMPBELL:  Mr. Chairman, my friend  
15          is using that term in some very particular sense, as he  
16          indicated, some narrow and particular sense, and I, in  
17          my submission, do not have any witnesses who are  
18          experts in that kind of area.  He is saying it's some  
19          sort of narrow financial test.

20                  I'm not prepared to have these witnesses  
21          embark on that kind of speculation, it's simply too big  
22          a question to be fairly put to them and its  
23          consequences, if that kind of language gets bandied  
24          about, are too serious to treat this matter cavalierly.

25                  MR. ROSENBERG:  Mr. Chairman, I will move

1 on then and talk about this in planning terms.

2 Q. Mr. Burke or Mr. Snelson, I put this  
3 question to you. I have reviewed Exhibit 3, and to be  
4 honest Mr. Monger has reviewed it in greater detail  
5 than I have, to determine where in Exhibit 3 that it  
6 was discussed from planning terms that if Ontario Hydro  
7 was within the projected or forecasted bandwidths, that  
8 a reasoned or reasonable critic could look at Ontario  
9 Hydro and come to the conclusions that Dr. de Bever has  
10 come to. And I am not saying he is right or wrong; I  
11 would just like to understand from planning principles  
12 where in the DSP Exhibit 3, Exhibit 452 or Exhibit 796,  
13 that Ontario Hydro has included within their  
14 methodology a review of the financial viability or  
15 stability of Hydro in relation to the forecasted demand  
16 and supply requirements?

17 MR. B. CAMPBELL: Mr. Chairman, again,  
18 haven't we been all through this? Panel 3 talked about  
19 all of the costing concepts, the financial tests, all  
20 of those things. We had Dr. Long on Panel 10. I  
21 believe all this material has been covered in previous  
22 panels.

23 THE CHAIRMAN: Well, my only recollection  
24 of it being covered, in the fashion that I understand  
25 Mr. Rosenberg's questions, is Panel 2 when I think it

1 was Mr. Cowan and others were on the stand talking  
2 about the financial accounting and costing and various  
3 other accounting principles that relate to operating  
4 the existing system.

5 I think perhaps the witnesses can answer  
6 the question and then we will see where we go from  
7 there.

8 MR. ROSENBERG: Maybe, Mr. Chairman, I  
9 will try to define this in planning terms and  
10 methodological terms, and it might be helpful if I go  
11 to some newspaper articles and so on that I have  
12 excerpted and I want to put in as an exhibit. They  
13 were distributed last week. This will deal with the  
14 second half of my concern which is reality and then the  
15 perception of reality.

16 THE CHAIRMAN: I take Mr. Campbell's  
17 point that we don't want to bandy about loosely words  
18 like "insolvency" and "death spirals" and matters of  
19 that kind. I don't say that they are forbidden words,  
20 but I think we have to be very careful about those  
21 kinds of words.

22 MR. ROSENBERG: I accept that, Mr.  
23 Chairman, and I will try to be careful.

24 I have a series of articles, it doesn't  
25 have an exhibit number yet.

1 THE REGISTRAR: 1050.

2 ---EXHIBIT NO. 1050: (CAC) Various newspaper and  
3 magazine articles.

4 MR. ROSENBERG: Q. Now, Mr. Snelson, I  
5 have excerpted about 20 pages of material from various  
6 what I will call popular press articles commenting on  
7 Ontario Hydro, and I am not asking you to tell me  
8 whether you agree or disagree at this stage. I just  
9 want to deal with the fact that the statements were  
10 made and there appears to be a public perception  
11 regarding Ontario Hydro.

12 At page 1 of the printouts, or of the  
13 documents, there is an article from the National News  
14 of the Globe and Mail and it is December 1992, and in  
15 the first column, this is an article by Mr.  
16 Mittelstaedt, he quotes the Chairman of Ontario Hydro,  
17 and I apologize, its not the clearest photocopy, but  
18 Mr. Strong says:

19 "What I seem to see as I look upon  
20 Ontario Hydro today as an outsider is a  
21 kaleidoscope of trouble. I see a  
22 company with high debt, high costs,  
23 depreciated revenues, and oppressive  
24 price increases. In short, I see a  
25 public corporation in crisis."

1                   And now I would like to turn your  
2           attention to an article that's at page 11 -- or excuse  
3           me, page 9 of the material that I have handed out, and  
4           this is an article from the Toronto Star and it is  
5           November 2nd, 1992, and it is by a Mr. Warren Gerard,  
6           and in the first column --

7                   MR. SNELSON:   A.   Excuse me, what was the  
8           date?

9                   Q.   November 2nd, '92.

10                  A.   Yes, I see it.

11                  Q.   It says, and this is literally the  
12           last full paragraph, it's another quote by the  
13           Chairman:

14                         "I have real reservations about  
15           nuclear power."   Strong told his first  
16           news conference as chairman, "I have seen  
17           utility after utility get into a disaster  
18           situation economically by these  
19           commitments to nuclear power, including  
20           Ontario Hydro."

21                  And then the quote goes on.

22                         What I will do is run through some of  
23           these and then I will have some questions about the  
24           planning process and how the planning process in --

25                  MR. B. CAMPBELL:   Mr. Chairman, just



1 before my friend continues. In my copy there is  
2 obviously some kind of qualification at the bottom of  
3 that column. The quote goes on and says: I am not one  
4 of those who feels this... neither am I a person who  
5 believes there is... I don't know what it says, but I  
6 think my friend should at least provide a complete  
7 article.

8 MR. ROSENBERG: I'm sorry, I apologize  
9 for that. We will do that.

10 MR. B. CAMPBELL: I take a particular  
11 point in pointing out that it is all part of the same  
12 quote, as I read this.

13 MR. ROSENBERG: Q. Now, there are other  
14 quotes. Turn to page 2, once again, Mr. Burke, I am  
15 dealing with perceptions, not necessarily realities,  
16 but page 2 there is a Globe and Mail editorial, and  
17 it's dated Tuesday, December 15th, 1992, and the second  
18 full paragraph starts with:

19 "Follow the Hydro monopoly as it  
20 spirals, counter-sensewise, to  
21 insolvency."

22 And there are other articles, but let's  
23 turn for the moment to the one at page 5 of the  
24 material and I will finish off with that, because the  
25 articles are in a similar vein.



1                   At page 5 there is an excerpt from  
2 something called Grant's Interest Rate Observer, the  
3 November 20th, 1992 edition, and at page 6 of the  
4 material, a comment from a newsletter writer in the  
5 financial field, the first and second paragraphs under,  
6 it says, the The Ugliest Double-A, the last sentence of  
7 the first paragraph is:

8                   "The investor's question is what will  
9 become of it without another great  
10 inflation.

11                  "Grant's went calling on Hydro  
12 because, as a Canadian reader suggested,  
13 the utility constitutes a kind of Olympia  
14 & York of public power: an institutional  
15 case study in the process and dynamic of  
16 debt deflation."

17                  And turning to the page now, and page 7  
18 of this newsletter, the first column, it says:

19                  "But the Hydro story will appeal even  
20 to those who own no Hydro debt. The  
21 subtler issue is what the utility means  
22 in the deflationary scheme of things. In  
23 the 1970s and early 1980s, Hydro took to  
24 heart the projections of perpetually  
25 rising energy demand. It overborrowed

1 and overexpended, particularly in nuclear  
2 power, massively exaggerating future  
3 provincial consumption. Thus it saddled  
4 its customers with costly electricity and  
5 its creditors with high fixed charges and  
6 itself with a credibility problem."

7 And then turning now to the next full  
8 paragraph of the column, it says:

9 "If Ontario Hydro were a free-standing  
10 issuer, rather than (in effect) a  
11 provincial subsidiary, it would not be  
12 able to borrow the equivalent of \$4  
13 billion (U.S.) a year at 60 basis points  
14 or so over the U.S. Treasury yield curve.  
15 However, on the strength of the  
16 provincial guarantee, it has run up \$37  
17 billion of debt, both long and  
18 short-term, a sum representing almost 84  
19 per cent of its capitalization."

20 Then to finish the piece, Mr. Burke, if  
21 you could turn to page 8, the Grant's newsletter comes  
22 to a conclusion, and it says at page 8, and there is a  
23 chart entitled Ontario Hydro - a cameo of decline.

24 The last paragraph says:

25 "Grant's never advocates panic.

1                   However, weighing the known risks, the  
2                   possible risks and the available rewards  
3                   we see no compelling values in the  
4                   securities of Hydro in the Province of  
5                   Ontario. On the contrary. What is the  
6                   best thing to happen to a bondholder? As  
7                   always, the payment of interest and  
8                   principal. And the worse thing? Don't  
9                   ask."

10                  Now, the remaining articles that we have  
11                  put out have a similar theme, and in fact, we have  
12                  articles from the Financial Post and the Globe and Mail  
13                  which quote the Grant's newsletter.

14                  Now, I would like to go back, Mr. Burke,  
15                  to my proposition. You have told us that we are within  
16                  the forecasted bandwidths from 1989, and the question I  
17                  have is: How did your planning methodology -- or how  
18                  does your planning methodology account for the fact  
19                  that it is clearly a perception within some public  
20                  press, the financial press, that even though Hydro is  
21                  within those bandwidths, it may in fact be in serious  
22                  financial difficulty?

23                  [9:40 a.m.]

24                  MR. BURKE: A. Clearly the difference  
25                  between the expected and the actual load is not the

1       only factor contributing to the current financial  
2       situation. I really can't comment on all of the other  
3       factors and I am not even able to exactly specify the  
4       extent to which the change in the load itself has  
5       contributed to the articles that you see here.

6               The total change by the end of 1992  
7       relative to what we were predicting in '88 is nearly 10  
8       per cent in load, and that certainly will have  
9       contributed to a significant portion of the difference  
10      in the rates that we are charging now versus what we  
11      might have expected in 1988 but it doesn't explain all  
12      of it by a fair bit.

13              So that for the question you have asked  
14      me, which is how is it possible for us to be toward the  
15      bottom end of the uncertainty band and have all these  
16      articles written at the same time, I can only say that  
17      the change in the expected load itself is only one part  
18      of the story and of course it presumes that these  
19      stories are in fact realistic as opposed to public  
20      perception, as you've called it.

21              Q. My concern is one of the  
22      appropriateness of Hydro's planning methodology and  
23      whether or not the methodology used by Hydro beginning  
24      in the original DSP filing is the appropriate model  
25      because of the concerns that have been raised about

1 Hydro's financial viability.

2 Let's deal with the planning process  
3 itself. I take it from your evidence to date that the  
4 Demand/Supply Planning Strategy and priorities have not  
5 changed since Exhibit 3, and in fact Exhibit 452 and  
6 Exhibit 796 are all consistent with Exhibit 3; is that  
7 correct, Mr. Snelson?

8 MR. SNELSON: A. They are all consistent  
9 with the Demand/Supply Planning Strategy which is given  
10 as an appendix to Exhibit 3.

11 Q. And within Exhibit 3, how did you  
12 account for issues like financial strength, financial  
13 viability, and where can I find those concepts within  
14 the demand/supply management strategy and priorities of  
15 Exhibit 3?

16 A. There are principles which are in the  
17 Demand/Supply Planning Strategy that deal with costs  
18 and with rates. The Demand/Supply Planning Strategy  
19 itself is focusing on the choice of future options for  
20 balancing demand and supply, rather than on the  
21 short-term management of net income rates and other such  
22 accounting matters.

23 Q. Mr. Snelson, do you consider the  
24 comments that we have read, the perceived comments, to  
25 be a failure of planning or a failure in some other



1 part of the Hydro organization?

2 A. To some extent they do represent  
3 situations where actual circumstances have moved  
4 outside the range of circumstances that were predicted  
5 at the time that past plans were prepared.

6 Q. Let's look at one example -- the  
7 death spiral, as it has been described in the testimony  
8 yesterday, and as discussed in some of the articles I  
9 have shown you. Would you agree with me, Mr. Snelson,  
10 that a death spiral, although a low probability event,  
11 is still a foreseeable event and that in fact it's low  
12 probability but very high impact?

13 A. I think we had some discussion  
14 yesterday as to the meaning of the term "death spiral"  
15 and what that relates to. I don't think I can  
16 speculate on the characteristics of a death spiral.

17 Q. I wouldn't want you to do that. What  
18 I'm asking really is this: Is the eventuality or the  
19 possibility of a death spiral or similar dire financial  
20 problems planned for in Exhibit 3? And, if so, where  
21 are they referred to?

22 MR. BURKE: A. In Exhibit 3 the  
23 long-term projection of the price of electricity was  
24 that it would be almost flat to declining in real  
25 terms; and price elasticities for demand I think are in



1 that document, but certainly were in the evidence of  
2 Panel 1 and in interrogatory responses supplied for  
3 Panel 1. On the face of that situation at that time we  
4 would not end up in a death spiral with any of the  
5 plans proposed at the time.

6 I think that the point that Mr. Snelson  
7 made that this is a short-term situation and that the  
8 long-term plans did not deal with all of the excursions  
9 from the short-term median positions is legitimate and  
10 it remains a short-term situation. It's not a  
11 long-term situation from the current perspective of  
12 Exhibit 796.

13 Q. So the short answer is you didn't  
14 plan for it in 1989 in Exhibit 3 and you are still not  
15 planning around the possibility of a so-called death  
16 spiral, Mr. Burke?

17 MR. SNELSON: A. We are taking action to  
18 control costs to keep rates within, if possible, the  
19 rate of inflation and we have indicated that certain  
20 actions have already been taken in that regard and that  
21 further actions are likely to be taken. So, if you  
22 like, these are actions taken to manage the corporation  
23 to provide rates that are acceptable to our customers  
24 and that's, we believe, in the best interest of our  
25 customers.

1 Q. Now given current events, have you  
2 changed the methodology that Hydro uses for long-term  
3 planning and in particular the methodology adopted in  
4 Exhibit 3 to account for what I describe as low  
5 probability but very high impact events such as death  
6 spirals?

7 A. We have made some changes in planning  
8 methodology - they were explained in Exhibit 452, which  
9 was the DSP Update - such as the change from planning  
10 to the upper to planning around the median.

11 And one of the objectives of that is to  
12 avoid increases in costs based upon trying to be in a  
13 position to meet high load growth with long lead time  
14 options, and I believe that that is in the direction of  
15 greater financial stability in the event of low load  
16 growth.

17 Q. Is there anything else that you have  
18 changed from Exhibit 3 to the present from a planning  
19 perspective in order to deal with these very acute  
20 problems which may be only of a short duration?

21 A. You have called them very acute  
22 problems, and our chairman has certainly referred to it  
23 at being -- he is quoted as using words such as  
24 "crisis" and we do accept that these are quite severe  
25 problems and that we are dealing with them in the short

1 term.

2 They have had affect on our long-term  
3 plans as we told you about in our direct evidence, and  
4 one of the reasons why the Manitoba Purchase was  
5 cancelled was - and I said this in my direct evidence -  
6 because we felt that the investment in the transmission  
7 infrastructure that is required to be able to take the  
8 Manitoba Purchase in the late 1990s is less affordable  
9 and that the impact on rates is not acceptable,  
10 particularly given the shifting view of the long-term  
11 benefit of that purchase.

12 So this is part of a series of actions,  
13 both short and long term, but mostly short term, which  
14 we are taking to respond to the current situation which  
15 we described in our direct evidence.

16 Q. Mr. Snelson, I will put the  
17 proposition to you directly and have you comment.

18 Your chairman has said that Ontario Hydro  
19 is in a crisis and he is also quoted as saying there is  
20 a disaster. We are within the load forecast  
21 contemplated in 1989. Is it your view as a  
22 professional planner that Exhibit 3, Exhibit 452 and  
23 796 address from a planning perspective the crisis or  
24 disaster that your chairman referred to?

25 MR. B. CAMPBELL: Just a minute.

1                   My recollection, without actually turning  
2                   up the article, is that the particular quote that used  
3                   disaster said that the chairman had seen other  
4                   utilities have disasters. We have an incomplete quote  
5                   I believe on that in any event and I think my friend is  
6                   misstating the information that he himself provided.

7                   MR. ROSENBERG: Well, Mr. Chairman --

8                   THE CHAIRMAN: Can we stay with crisis.  
9                   I think the question remains the same if you are  
10                  dealing with crisis.

11                  MR. ROSENBERG: I'm satisfied with that.

12                  Mr. Monger has obtained the last sentence  
13                  of the Toronto Star article, which is page 9 of the  
14                  print-out or page 9 of the hand-out.

15                  At the end of the line it says:

16                  I am a person who believes there is no  
17                  place --

18                  Excuse me. Sorry.

19                  Neither am I a person who believes  
20                  there is no place for nuclear power.

21                  So what has been cut out is the words "no  
22                  place for nuclear power".

23                  Q. Now deleting the word "disaster" from  
24                  my question, Mr. Snelson, just using the word crisis,  
25                  do you feel that it is a failure of planning or that

1 Exhibits 3, 452 and 796 have properly accounted for the  
2 factors leading up to the crisis that your chairman has  
3 been quoted as saying exists at Ontario Hydro?

4 MR. SNELSON: A. As we have said, this  
5 is a situation where the crisis aspects or the severe  
6 aspects of it, which is a word I would prefer, occur in  
7 the early to mid-1990s. I don't believe that that is a  
8 failure of the planning that was described in Exhibit 3  
9 or Exhibit 452 or Exhibit 796 because all of those  
10 documents are looking at planning over a much longer  
11 time period.

12 There are some aspects of the current  
13 situation which are to some degree the result of actual  
14 circumstances moving outside the range that was  
15 encompassed in planning decisions that were made 10,  
16 15, and 20 years ago.

17 Q. Mr. Snelson, a remark or a joke you  
18 hear about doctors is that the operation was a success  
19 but the patient died. Are you telling me that you are  
20 in a crisis or not in a crisis. And if you are not in  
21 a crisis, then you are saying everything was  
22 contemplated in the plan?

23 [9:55 a.m.]

24 MR. B. CAMPBELL: Just a minute.

25 With respect, Mr. Chairman--



1 THE CHAIRMAN: I don't think he quite  
2 said that.

3 MR. B. CAMPBELL: --he has answered the  
4 question.

5 THE CHAIRMAN: No, in my view he hasn't  
6 quite answered the question that Mr. Rosenberg asked a  
7 few moments ago, but I think he did make clear what he  
8 assessed the present situation to be and how they were  
9 addressing it in the short-term.

10 What he has not answered yet is to what  
11 extent, if any, has Hydro taken into account in its  
12 plans this kind of a situation for the long-term  
13 considerations. He hasn't answered that.

14 MR. ROSENBERG: I am satisfied with the  
15 Chairman's paraphrase of my question.

16 MR. SNELSON: And that was that I should  
17 answer the --

18 MR. ROSENBERG: Q. What steps has Hydro  
19 taken to account for the current circumstances?

20 MR. SNELSON: A. I believe that in terms  
21 of long-term planning I have indicated some of the  
22 changes, but perhaps I can summarize them, that would  
23 help.

24 We have cancelled the Manitoba Purchase,  
25 that's the most, one of the most recent actions, and I



1 described just a few minutes ago some of the reasons  
2 for that.

3 We have changed our emphasis on major  
4 supply and on non-utility generation, and that was done  
5 prior to the release of Exhibit 452, and we placed  
6 greater reliance on non-utility generation. Those two  
7 actions in particular are both in the direction of less  
8 capital spending by Ontario Hydro, which reduces our  
9 exposure to a future situation of high fixed costs  
10 based on interest and depreciation. Now there may be  
11 cost consequences of those actions, too, but they are in  
12 the direction of reducing that part of our cost  
13 structure, or less increase in that part of our cost  
14 structure.

15 And other factors are the proposal to  
16 defer environmental controls in the 1990s which will  
17 have a substantial reduction in capital spending.

18 I think if you review the October board  
19 memorandum which is addressing the capital program and  
20 shows a reduction in capital spending over the next 10  
21 years of between \$7 and \$10 billion, then you will see  
22 that we are taking very substantial action and we have  
23 described it, to respond to the situation.

24 Q. I have the point, Mr. Snelson, that  
25 Hydro is taking steps to deal with the immediate

1       problem. I would like to ask this question: How has  
2       Hydro changed or altered their long-term planning  
3       methodology to incorporate short-term events such as  
4       these, or capture them within the long-term planning  
5       methodology that Hydro uses?

6               A. Well, I have answered that in that we  
7       are giving more emphasis to short lead time options, we  
8       have changed to planning to the upper, to planning  
9       around the median. So there are a number of changes  
10      that have taken place and we have described them.

11             Q. Is there any explicit recognition of  
12      financial viability as a weighting factor in your  
13      long-term planning methodology, and if so, where would  
14      I find that in Exhibit No. 3?

15             A. If you turn to page 15-63 of Exhibit  
16      3, and the preceding page, you will see that at the  
17      time of the original DSP we were looking at the  
18      financial consequences of our plans, that annual net  
19      borrowing we have described on 15-62, debt ratio is  
20      shown on 15-63, and those are relevant to the financial  
21      stability considerations that you were discussing.

22             Q. Now, given the current situation, Mr.  
23      Snelson, that Hydro finds itself in, have you revisited  
24      the demand/supply planning methodology to determine if  
25      it is still an appropriate long-term planning

1 methodology as it relates specifically to financial  
2 issues, such as viability, debt service ratios, and so  
3 on?

4 A. It was our position in Exhibit 3 and  
5 in the discussions that we had on Panel 3, that  
6 financial factors were a part of our decision-making  
7 process and that we project the financial performance  
8 of our plans, and that that's a factor.

9 Q. I understand it's a factor. But have  
10 you revisited whether you have analyzed it correctly,  
11 and second, whether you have weighted financial issues  
12 appropriately in your long-term planning methodology?

13 A. We have always said that the  
14 weighting of the different factors can shift from time  
15 to time according to the relative importance of the  
16 issue that was seen at that time, and in current  
17 planning the weighting of these financial factors is  
18 carrying greater weight as I said in my direct  
19 evidence.

20 Q. Now, given the change in weighting of  
21 financial matters over the last three years, Mr. Burke,  
22 has Hydro undertaken an economic impact analysis of 796  
23 and how it will affect Hydro's customers and the  
24 Province of Ontario?

25 MR. BURKE: A. I think you will have to

1 clarify what you mean by economic analysis, at least  
2 it's not clear to me what you are talking about.

3 Q. In choosing the original plans which  
4 are set out in Exhibit No. 3, my review and  
5 recollection of the evidence is that in determining a  
6 process to select a particular option, that Hydro in  
7 part relied upon an economic analysis of each of the  
8 various options, and that that economic analysis looked  
9 at the impact of each of the potential options on  
10 Hydro's customer base and on the Province of Ontario.  
11 Now is my recollection correct?

12 A. One of the pieces of information used  
13 to select plans was the relative economic impact of the  
14 plans; that is, plans were compared to, alternative  
15 plans were compared to Plan 15, the base case plan.

16 It's not possible, really, to do an  
17 economic impact of a single plan in the long-term for  
18 interesting reasons. But the trouble with what you are  
19 asking me for Exhibit 796 is we really have not got  
20 more than one plan worked out here at this point, and  
21 certainly what we would be able to provide at best  
22 would be the relative economic impacts of alternative  
23 plans, just as we did for Exhibit 3 when such plans are  
24 available.

25 Q. So I take it your response is that



1 you haven't done an economic impact analysis with  
2 respect to what is Exhibit 796 because it wouldn't be  
3 appropriate because there is only one plan; is that  
4 your answer?

5 A. Well, I think, yes, my understanding  
6 at this point is we have not had a chance to do that  
7 analysis yet, and it would take a more complete  
8 analysis of the implications of the planning  
9 information contained in Exhibit 796. We have one or  
10 two illustrative cases here, and when we go further  
11 than that, it would be appropriate to look at the  
12 economic impact of the alternatives relative to some  
13 central case.

14 Q. Well, Mr. Burke, given that there is  
15 only one case and nothing to measure it against, do you  
16 feel from a planning perspective that it is appropriate  
17 then to come to this Board with only one plan that  
18 cannot be measured against other options.

19 MR. B. CAMPBELL: With respect, Mr.  
20 Chairman. I think my friend is getting into a matter  
21 which inevitably is going to be a matter of argument.  
22 We rely on the all of the evidence before the Board,  
23 not just 796. Everybody keeps forgetting that there is  
24 a large mountain to which this is a small peak. And we  
25 certainly take the position that there is more than

1       adequate information before the Board right now for the  
2       Board to deal properly with the matters that are before  
3       it.

4                   MR. ROSENBERG:   Mr. Chairman, I  
5       understood Mr. Burke's evidence to be that he could not  
6       compare 796 to anything else, that it is the only thing  
7       that's before the Board.

8                   MR. B. CAMPBELL:   That's not what he  
9       said.

10                  THE CHAIRMAN:   I don't think that's quite  
11       what he said.

12                  MR. BURKE:   That's not what I said.

13                  I said that I needed to have -- if you  
14       ask me about the implications of the plans, the  
15       economic impact of the plans in 796, we haven't done  
16       that analysis, and I indicated that at best one would  
17       be able to give the relative impact of alternative  
18       plans in 796, but there wouldn't be a single economic  
19       impact associated with one plan.

20                  There is only one case fully fleshed out  
21       in 796. I did not say that one could not analyze the  
22       implications of the plans here versus other plans,  
23       although frankly that would be a difficult task, it  
24       probably could be done, we have not tried to do that.  
25       I don't know that it is particularly relevant as all of



1 the circumstances change to try to recast the analysis  
2 in comparative terms.

3 MR. ROSENBERG: Q. Well, you would agree  
4 that Ontario Hydro's response to the surplus problem  
5 that they are in now is not the only possible response;  
6 that is, Exhibit 796 does not set out the only possible  
7 response to the current real life situation faced by  
8 Ontario Hydro, you agree with that, wouldn't you, Mr.  
9 Burke or Mr. Snelson?

10 MR. SNELSON: A. Yes, and there were  
11 other all alternatives that were considered in coming  
12 up with the decisions that had been being made and they  
13 are described in the various board memoranda and other  
14 supporting documents.

15 Q. And therefore, Mr. Burke, it would be  
16 possible to do an economic impact analysis similar to  
17 what you did with the original Exhibit 3 options for  
18 the option you have described in Exhibit 796?

19 A. Well, let me just clarify my previous  
20 answer.

21 There are options that are discussed and  
22 the relative merits of options including their effects  
23 on matters external to Ontario Hydro such as provincial  
24 economy, their effects on the financial situation and  
25 so on, are discussed in the document, and the

1 particular one that I am referring to is the October  
2 Board memorandum.

3 And so the analysis was done more on the  
4 characteristics of the various options for handling the  
5 surplus and they were selected on an option basis and  
6 put together into a plan rather than looking at a  
7 variety of different plans.

8 Q. Mr. Snelson, I have Exhibit A in  
9 front of me. Could you just point me to these options  
10 in the document so that I understand in more detail  
11 what it is you are referring to.

12 A. Well, options that are -- and I refer  
13 you to this as a list, not because it's a cost ranking,  
14 options are listed in figure 4, and that is on page 6  
15 of attachment A to attachment A, to Exhibit 796.

16 Q. Figure 4 is the capital program  
17 projects, economic impact of 10-year project deferrals?

18 A. Yes. In the left-hand column is a  
19 listing of options that were considered in the process  
20 of selecting options to manage surplus as seen -- as  
21 being required at the time of the October board  
22 memorandum.

23 Q. From this list on figure 4, you  
24 extracted certain preferred alternatives and those  
25 preferred alternatives became the plan for Exhibit 796?

1                   A. Partially. Some of the options shown  
2     on figure 4 were selected based both on cost  
3     information and consideration of other factors to a  
4     sufficient amount to control the largest part of the  
5     surplus as seen in October, and those decisions are, in  
6     the main, reflected in Exhibit 796. But we also have  
7     to recognize that in December there was a further  
8     change in the load forecast, there was another set of  
9     decisions that were made based on that and upon  
10    Manitoba's response to the suggestion of a deferral.  
11    So there were decisions made in December and they are  
12    also reflected in Exhibit 796. So Exhibit 796 builds  
13    upon that and includes the decisions made in December  
14    as we described them.

15                  Q. Now, I would like to go back to the  
16    opening of my cross-examination where we established  
17    that the current primary peak load is within that which  
18    was contemplated in your original filing, and why can  
19    you not take Exhibit 796, given that it was within the  
20    range of reality that you forecasted, and take the plan  
21    that you have identified in 796 and look at its  
22    economic impact in the same way that you did all of the  
23    other plans that were put forward in Exhibit 3?

24                  MR. BURKE: A. Well, let me see if I  
25    understand what you are asking about. I think you are

1 asking is it possible to take one of the plans from  
2 Exhibit 3 and show how the plan that we have now, how  
3 its economic impact compares to that plan for the  
4 province. Is that what you are asking?

5 Q. I am just going to find, in Exhibit  
6 3, you set out, as it were, a menu of options, plans 1  
7 to X, and in Exhibit 3 you selected certain preferred  
8 plans, Plan 15 was one of the preferred plans, am I  
9 correct, Mr. Burke?

10 MR. SNELSON: A. At that time Plan 15  
11 was the preferred plan.

12 I think it helps to maintain the  
13 distinction between options and plans. Plans are a  
14 selection of options to meet the total system  
15 requirement and put together with timing and in  
16 proportions as necessary, whereas the options are more  
17 the building blocks that go into the plans.

18 Q. Now, the reality is you have moved  
19 from Plan 15 to let's call it Plan 796, that's the  
20 preferred plan; is that correct, Mr. Snelson?

21 A. That's our current projection of how  
22 our decision-making at the moment will play out over 25  
23 years, so in that sense it's the current plan.

24 Q. And Plan 796, in fact the load  
25 forecasts fall within the load forecasts that you

1 originally planned for in preparing Exhibit 3, and we  
2 established that this morning; correct, Mr. Burke?  
3 [10:16 a.m.]

4 MR. BURKE: A. Yes.

5 Q. Now my question is given that you  
6 could do an economic impact analysis on all of the  
7 options relative to Plan 15 --

8 MR. SNELSON: A. All of the plans  
9 perhaps, yes.

10 Q. All of the plans relative to the ones  
11 identified, why can't you do exactly the same analysis  
12 for Plan 796.

13 MR. BURKE: A. It's possible that you  
14 could reconstruct that. We haven't done that yet. I'm  
15 not sure what you would learn by doing it. I think we  
16 have indicated already, I believe this topic came up in  
17 Panel 1 to a limited extent, that directionally  
18 economic impact results would be consistent with least  
19 cost plans subject to adjustments were the options in  
20 the plans to differ significantly in their Ontario  
21 content.

22 I'm not sure from -- well, I'm not sure  
23 that the options have changed very much and the mix of  
24 Ontario contents have changed very much.

25 Q. But the reality is, Mr. Burke, we



1 don't know because you haven't done the work; correct?

2 A. We don't know. But it is the case  
3 that the wide range of plans that were analyzed for  
4 Exhibit 3 their economic impacts did not differ  
5 dramatically in the long term because they were each  
6 least cost plans.

7 Well, the point is that we don't know  
8 what the effect is in the change of preferred plan in  
9 terms of economic impacts on your customers in Ontario  
10 because you haven't done the work, and that's the end  
11 of the point, isn't it, Mr. Burke?

12 A. One aspect of the impact on our  
13 customers that we have a sense of is the rate that  
14 comes out of the plan. Although we do not have a new  
15 rate projection consistent with all of the decisions  
16 that have been made since October, we know that  
17 directionally it will be down from -- the rate impact  
18 will be down from the projection that was prepared in  
19 October, which is a beneficial effect.

20 Q. Now you say you haven't done an  
21 economic analysis yet. Is your evidence that you are  
22 going to do one and present it to the Board or you  
23 don't know whether you are going to do one and present  
24 it to the Board?

25 MR. SNELSON: A. I don't believe that we

1 have decided at this point to do an economic analysis.

2 And I would add to the points that Mr.  
3 Burke has made, that the comparability of an economic  
4 forecast that you might do based on the plan that is  
5 shown in Exhibit 796 to the economic impact of the  
6 plans that were made in Exhibit 3, back in 1989, would  
7 be affected by the change in the background data as to  
8 what is the expected other conditions in the economy.

9 Q. Now, Mr. Snelson, finishing off on  
10 this point about plans. If you turn back to figure 4  
11 on the October memorandum, that's attachment A to  
12 Exhibit 796, and that's found at page 6 of attachment  
13 A.

14 Just to ensure that I have my methodology  
15 and terminology correct, you would agree with me that  
16 from the options listed on figure 4 that there are  
17 alternative plans available to Ontario Hydro other than  
18 the plan that they selected which is found in Exhibit  
19 796?

20 A. You could select different options  
21 for managing surplus and that would result in different  
22 plans.

23 Q. And it's likely that that different  
24 plan would have a different economic impact than the  
25 one that was actually selected by Ontario Hydro?

1                   A. That is likely that if you change  
2 something, then there will be a change in other things.  
3 Whether that change will be large is another matter.

4                   MR. ROSENBERG: Mr. Chairman, if I could  
5 just have one minute to review my notes.

6                   Q. One point that I didn't deal with,  
7 and I will finish on this point, is the spectre raised  
8 in the Grant's newsletter -- that's at Exhibit 993 --  
9 excuse me, 1050, at page 5 is the excerpt from the  
10 Grant's newsletter.

11                   At page 6 and page 7, the Grant's  
12 newsletter -- I will just let you turn that up Mr.  
13 Burke and Mr. Snelson. The Grant's newsletter deals  
14 with a very important problem that could face Ontario  
15 Hydro and that is a limit to their ability to access  
16 the debt markets.

17                   Grant's newsletter, for what it's worth,  
18 comes to some very definite conclusions about Ontario  
19 Hydro's current debt and debt servicing ability and I  
20 don't ask you to comment on that issue; that certainly  
21 is a very important issue and it would need great  
22 analysis to come to a conclusion.

23                   But Grant's says that Ontario Hydro may  
24 be at the limit of its borrowing capacity. Let's take  
25 that as a hypothetical situation. Does your long-term

1 plan in some way weight or account the impact on  
2 Ontario Hydro of having limited or no further access to  
3 the debt markets?

4 MR. SNELSON: A. Well, we are talking  
5 hypothetical here.

6 Q. Yes, hypothetical.

7 A. And quite obviously I am not in any  
8 way commenting upon the validity or otherwise of that  
9 hypothesis.

10 Q. Yes.

11 A. One of the things that we do in  
12 long-term planning, and we have done it consistently in  
13 my experience over more than 20 years -- more than 15  
14 years, sorry, in terms of the generation side - is that  
15 when a long-term plan is prepared and a financial  
16 projection is done and that results in some prediction  
17 of borrowing requirements, then the treasury of Ontario  
18 Hydro is consulted as to the viability of the borrowing  
19 program that would result.

20 And we did show you, for instance, in  
21 Exhibit 3 the projections of borrowing that were  
22 considered and came out of the plans in Exhibit 3. And  
23 that's a part of our process that we do follow.

24 Q. So turning to page 7 of the Grant's  
25 newsletter, and one of the quotes that I read to you

1 was in the second full paragraph, first column on page  
2 7, of Exhibit 1050, where Grant's newsletter questions  
3 the appropriateness of Ontario Hydro borrowing at 60  
4 basis points above the U.S. treasury yield curve.

5 Are you saying, Mr. Snelson, that in fact  
6 you have plotted scenarios where Hydro's borrowing  
7 would be higher than 60 basis points above the U.S.  
8 treasury yield curve? And, if so, where do we find  
9 that in the evidence?

10 A. We do in our analysis do sensitivity  
11 to discount rates. And, as described in Panel 3,  
12 discount rate is quite closely related to the cost of  
13 borrowing.

14 Q. Well, looking at Exhibit 796, can you  
15 tell me where in 796 you have accounted for a potential  
16 increase in borrowing costs or debt service costs for  
17 Ontario Hydro?

18 THE CHAIRMAN: To put this in context.  
19 My recollection is that in Panel 10 in every single  
20 option there was a segment in the evidence dealing with  
21 impact on borrowing.

22 MR. B. CAMPBELL: That's correct.

23 THE CHAIRMAN: So I guess the question  
24 is, to what extent has that been necessary to update  
25 that for 796.



1 MR. ROSENBERG: Yes, Mr. Chairman.

2 MR. SNELSON: I'm trying to find a figure  
3 of borrowing requirements in the materials in Exhibit  
4 796 and I can't find it. There was a financial  
5 projection done consistent with the October board  
6 memorandum. Figure 8, which is on page 8 of attachment  
7 A to attachment A to Exhibit 796, has the electricity  
8 price forecast.

9 MR. ROSENBERG: Q. Sorry, page 8 of  
10 exhibit?

11 MR. SNELSON: A. Page 8 of attachment A  
12 to attachment A to Exhibit 796.

13 Clearly there was a financial projection  
14 done otherwise we could not have shown the electricity  
15 pricing effects. In terms of illustrating the effects  
16 on matters such as borrowings, then that particular  
17 figure was not put into the exhibit but you will notice  
18 that on that same page is an indication of the capital  
19 program expenditures, and the main thrust or one of the  
20 main thrusts of attachment A is to review the capital  
21 program with a view to reducing it with a view to  
22 reducing borrowings.

23 Q. So your answer is that it was done  
24 but it is not explicit in the documents which have been  
25 filed?

1 A. Yes.

2 Q. Now can you make it explicit with  
3 some ease by undertaking to do so?

4 A. I believe it should be available. If  
5 there are any difficulties -- I think we can give that  
6 undertaking subject to looking into it and finding out  
7 whether there are any difficulties we don't know of.

8 Q. Mr. Burke has a comment?

9 A. Mr. Burke is just pointing out that  
10 the price projection that I have referred to and the  
11 borrowing projection that would be consistent with that  
12 would be the situation as of October. We don't yet  
13 have a financial projection consistent with all the  
14 decisions that were made in December.

15 Q. When would a projection be available  
16 with respect to the decisions made in December, Mr.  
17 Burke?

18 A. Well, there has to be a series of  
19 calculations of that nature done and made available for  
20 the Ontario Energy Board submission. So it would  
21 certainly be done by that time. Whether some  
22 intervening result would be produced, I don't know.

23 Q. Can you then undertake to make those  
24 available in this hearing when they are available for  
25 the Energy Board hearing.

1 MR. B. CAMPBELL: We can undertake to do  
2 that with respect to borrowing requirements, that's  
3 fine.

4 THE REGISTRAR: 940.24.

5 ---UNDERTAKING NO. 940.24: Ontario Hydro undertakes  
6 to provide the financial projections with  
7 respect to the decisions made in  
8 December.

8 MR. ROSENBERG: Q. And the last question  
9 or subject for you, Mr. Snelson, is you have seen what  
10 Grant's has said about Ontario Hydro's current and  
11 potential borrowing capacity. Do you agree or disagree  
12 with the statements made by Grant's?

13 THE CHAIRMAN: Surely that will be  
14 encompassed in the undertaking. I think you have said  
15 you didn't ask Mr. Snelson to agree or disagree with  
16 what was in that material and perhaps we should stick  
17 with that. The answer to it will be, I expect, in the  
18 answer to the undertaking.

19 MR. ROSENBERG: Yes. Yes, because they  
20 will be giving a forecast.

21 THE CHAIRMAN: They are going to tell you  
22 what the impact of the plan is on borrowing and that I  
23 would think encompass that.

24 MR. ROSENBERG: Yes. I will leave it at  
25 that, Mr. Chairman.

1                   Those are all our questions. Thank you.

2                   THE CHAIRMAN: I am mindful that we are  
3 going to have our noon break in a window between 12:00  
4 and 1:30. Perhaps we should now take the morning  
5 break, and Mr. Klippenstein you are next on.

6                   MR. KLIPPENSTEIN: Yes, Mr. Chairman.

7                   THE REGISTRAR: Please come to order.  
8 This hearing will recess for 15 minutes.

9                   ---Recess at 10:35 a.m.

10                  ---On resuming at 10:55 a.m.

11                  THE REGISTRAR: Please come to order.  
12 This hearing is again in session. Be seated, please.

13                  THE CHAIRMAN: Mr. Klippenstein.

14                  MR. KLIPPENSTEIN: Thank you, Mr.  
15 Chairman.

16                  CROSS-EXAMINATION BY MR. KLIPPENSTEIN:

17                         Members of the panel, as you are probably  
18 aware, I represent Pollution Probe. Just by way of  
19 general introduction. As you may recall, Pollution  
20 Probe has a particular interest in the role of  
21 standards in reducing energy requirements, and I will  
22 be addressing mostly standards this morning.

23                         Before I actually get into the questions  
24 on the substance of standards, the cross-examination  
25 this morning has focused on the financial situation of

1 Hydro. And with that in mind, I would refer you to  
2 Exhibit 796, the executive summary, page 4, the last  
3 bullet on the page.

4 And I will quote part of that sentence:

5 "Reliance on standards and codes and  
6 no incentives for fuel switching makes  
7 achievement of these demand management  
8 resources less costly..."

9 And --

10 THE CHAIRMAN: Well, it's not the end of  
11 the paragraph.

12 MR. KLIPPENSTEIN: It is not the end of  
13 the paragraph. I will finish the sentence, although I  
14 don't think it changes the substance:

15 "...and lessens inequity concerns for  
16 customers."

17 Q. Now, my question is: Would you  
18 agree that as a general proposition reliance on  
19 standards and codes is cheaper than using financial  
20 incentives in other areas as well as fuel switching?

21 MR. SHALABY: A. We say so and we do  
22 agree.

23 MR. BURKE: A. I would just like to  
24 qualify what Mr. Shalaby said. It is cheaper for  
25 Ontario Hydro. It is not necessarily changing the cost



1 to the customer of meeting that efficiency level.

2 Q. All right. Thank you.

3 I would then like to enter an area  
4 related to fuel switching. And, in particular, what I  
5 see in these documents as being an abandonment of  
6 standards for fuel switching in new commercial and  
7 residential buildings, so I will address some questions  
8 to that area.

9 First of all, I would like to identify  
10 what I see from these documents as a difference in the  
11 amount of savings that are expected with respect to new  
12 commercial and residential buildings from this latest  
13 exhibit to the previous plan.

14 I will start by referring you to Exhibit  
15 257, which is entitled "Fuel Switching Potential in  
16 Ontario by Year 2000". And if I could refer you in  
17 that document to page 13, table 8.

18 Would you agree with me that according to  
19 that previous evidence, the potential for savings by  
20 fuel switching in commercial new buildings to the year  
21 2000 was 795 megawatts? That's what the chart says.  
22 That was the evidence at that time I believe.

23 A. Yes.

24 Q. All right. If you could keep that  
25 available because I will be referring to it again. But

1 I would like to take that 795 and see what has happened  
2 to it.

3 If you could refer again to Exhibit 796,  
4 the executive summary, page 7, and the very last bullet  
5 on the page says:

6 "No government regulations proscribing  
7 the use of electricity for space and  
8 water heating in new buildings are now  
9 anticipated. The penetration rates are  
10 reduced from 100 per cent to the generic  
11 sectoral penetration rates, 23 per cent  
12 in residential, 33 per cent in  
13 commercial, used in the 1990 load  
14 forecast."

15 [11:00 a.m.]

16 Now, would it be accurate for me to take  
17 the -- I beg your pardon, I need to do an intermediate  
18 step in order to get to this place, so let me put that  
19 on hold and take a step backwards.

20 On the same page, move up three bullets  
21 to the second bullet, which says:

22 "The eligibility of new commercial  
23 building stock to shift off electricity  
24 is now estimated to be 40 per cent, not  
25 100 per cent as assumed in 1991."

1 Now, would it be fair for me to take the  
2 795 commercial sector new building potential I referred  
3 to earlier, apply the 40 per cent to obtain the new  
4 revised commercial sector potential, would that be the  
5 appropriate calculation?

6 A. No.

7 Q. Why would it not be?

8 A. Because the potential in the new  
9 building stock in Exhibit 257 was based on the 1989  
10 load forecast for new commercial space heating load,  
11 and the 1992 forecast for new commercial space heating  
12 load is considerably different.

13 Q. Can you point out for me the number  
14 that would be equivalent to the 795; in other words,  
15 the potential new commercial building stock savings  
16 from fuel switching?

17 A. I will see if I can find that.

18 I don't believe that in the evidence that  
19 you have before you this number is included. I think  
20 it may be included in the supplementary evidence we  
21 filed -- that's discussed in forthcoming documents and  
22 for which you have already given undertakings. But the  
23 total space heating load between 1991 and 2000 in new  
24 commercial buildings is given in Exhibit 257, it's  
25 about 2.1 terawatthours and the corresponding figure

1 for the 1992 forecast is 1.1 terawatthours.

2 The reason why the forecast is so much  
3 lower is two-fold: First of all, the amount of floor  
4 space being added over the 90s is reduced, it's  
5 reduced - let's see now - about 20 per cent from the  
6 forecast made in 1989.

7 THE CHAIRMAN: I'm sorry, how many per  
8 cent did you say?

9 MR. BURKE: About 20 per cent. That is  
10 the year 2000 floor space forecast in the 1989 load  
11 forecast was, I have here 594 million square feet of  
12 commercial floor space and it goes down to 478 in this  
13 forecast. And that reflects the vacancy rate and the  
14 over-building of the commercial sector in the province,  
15 and effectively it's in the 1990s that the change in  
16 the square footage forecast occurs; that is, we have  
17 effectively delayed about three years of floor space  
18 additions because of the economic climate we are in and  
19 the excess of space in the commercial sector.

20 At the same time, between the '89 and '90  
21 load forecast there was a considerable change in the  
22 expected electricity use per square foot for space  
23 heating purposes in commercial buildings. There was  
24 some evidence on Panel 4 to the effect that by using  
25 the 1989 forecast we were probably overstating the

1 potential for commercial floor space -- sorry,  
2 commercial space heating in new or existing buildings,  
3 for that matter, to be reduced because of that change,  
4 but because all of the estimates available at the time  
5 of Panel 4, and so the information introduced in  
6 Exhibit 257 was based on the 1989 load forecast. We  
7 couldn't change one part without changing everything.

8 But the electricity use per square foot  
9 is down considerably, it's down about 30 per cent or so  
10 in our forecast in 1992, the electricity use per square  
11 foot for space heating in new commercial space relative  
12 to what we said in 1989. Most of that change was  
13 already reflected in the 1990 load forecast, but was  
14 not included in these figures.

15 So we are starting from a new space  
16 heating load in the commercial sector, which is already  
17 reduced to about 50 per cent from what we said in  
18 Exhibit 257.

19 Q. All right. Can I try the same  
20 exercise then, and instead of starting with the 795,  
21 taking an approximate figure of 400 megawatts for the  
22 potential, and allowing that this would be an estimate  
23 and that the documents you will be producing will show  
24 the accurate figure, for purposes of a discussion and  
25 if you want to limit it in whatever way you want, can I



1 take 400 as a figure which would appear to be where we  
2 are headed for that; is that fair?

3 A. Yes.

4 Q. All right. Let me use that as an  
5 estimate, then, as the commercial sector fuel switching  
6 potential savings in new buildings to the year 2000.  
7 Then let me return to the Executive Summary page 7, and  
8 move from the 400 which is a potential to the  
9 attainable, using the 40 per cent figure in bullet No.  
10 2. And if I apply that percentage, I get an attainable  
11 of 160 megawatts; is that a fair calculation?

12 THE CHAIRMAN: You are taking 423 per  
13 cent of 400?

14 MR. KLIPPENSTEIN: I am taking 40 per  
15 cent of 400.

16 THE CHAIRMAN: I'm sorry.

17 MR. KLIPPENSTEIN: I will get to that  
18 step next.

19 THE CHAIRMAN: I thought the 40 per cent  
20 was filled into the analysis that Mr. Burke had just  
21 given. Is that not right?

22 MR. KLIPPENSTEIN: I am taking the 40 per  
23 cent because I am starting out with the 400 as the  
24 potential total, and I am moving from potential to  
25 attainable by using the 40 per cent factor in bullet

1 No. 2 on page 7.

2 THE CHAIRMAN: Okay.

3 MR. KLIPPENSTEIN: Q. Is that a fair  
4 next step?

5 MR. BURKE: A. To go from the total new  
6 space heating load to the eligible space heating load  
7 for fuel switching, you apply 40 per cent. To go to  
8 the attainable is the second step, which implies that  
9 market penetration that you get in the eligible  
10 potential.

11 Q. Okay. Let's do step 1 before we do  
12 step 2. I apologize for confusing the two.

13 Moving from the potential of  
14 approximately 400 to the eligible, I would apply the 40  
15 per cent, which produces for me 160 megawatts of  
16 eligible savings due to fuel switching in the new  
17 commercial sector; is that correct?

18 A. That's roughly right, yes.

19 Q. Let me then move to step 2, which I  
20 would find in bullet No. 5, the last one on page 7 of  
21 the Executive Summary, I would apply the penetration  
22 rate for commercial given there of 33 per cent, and  
23 multiply 160 times 33 per cent, and obtain 52 megawatts  
24 as the forecast savings due to fuel switching in the  
25 commercial sector for new buildings to the year 2000;

1 is that a correct --

2 A. Yes, that's roughly right.

3 I think the number we get is 73 megawatts  
4 at the end of all this, but there may be various other  
5 smaller things there.

6 Q. Let's use your number then, 73  
7 megawatts. Now, those 73 megawatts are obtained  
8 through fuel switching in the absence of any standards  
9 requiring fuel switching in the new commercial sector;  
10 is that correct?

11 A. No, it's not -- well, I think  
12 literally it is correct. We have included in the basic  
13 load forecast the application of ASHRAE 90.1 which does  
14 not require fuel switching. But I think it is believed  
15 that one way that new building developers will meet  
16 ASHRAE 90.1 is to use systems other than the more  
17 electricity intensive space heating systems to meet the  
18 energy budget described by ASHRAE 90.1.

19 So that I think there is some impact of  
20 ASHRAE 90.1 on reducing the electricity use per square  
21 foot, for new commercial space in the 1992 forecast.

22 Q. All right, I will keep that in mind.

23 Let me take the 73 megawatts which you  
24 identified to me as the more appropriate figure, that  
25 73 megawatts would be 33 per cent of the eligible

1 savings, and I guess I am working backwards now. I  
2 obtained a figure, you corrected it to 73.

3 A. I think we used 34 per cent. I think  
4 it is 216 megawatts for the potential, for induced fuel  
5 switching.

6 I would also point out that there is some  
7 natural fuel switching -- sorry.

8 I am going to have to go back. 73 is the  
9 number for the total for commercial sector, it is not  
10 specifically for new. So the 50 may be more correct in  
11 fact. I'm sorry. 73 is the total for attainable  
12 induced fuel switching in the commercial sector in the  
13 year 2009.

14 Q. Okay, thank you for that  
15 clarification.

16 Just to confirm how the 52 was obtained,  
17 I took a rough estimate of 400 for potential, times an  
18 eligibility ratio of 40 per cent, times your  
19 penetration rate of 33 per cent, to obtain  
20 approximately 52.

21 A. Yes.

22 Q. Now, would you agree with me, that if  
23 a regulation was in place requiring fuel switching for  
24 new commercial buildings, we would then have a 100 per  
25 cent penetration rate, and we would, instead of having

1 52, have 160 megawatts?

2 A. Yes. I think subject to the usual  
3 proviso that it presumes that you can enforce the  
4 regulation.

5 Q. That certainly seemed to be at least  
6 a plausible scenario at the time of Exhibit 257,  
7 because that's one of your assumptions; correct?

8 A. Well, Exhibit 257 was literally that,  
9 it was a set of scenarios, and it proposed a way of  
10 achieving various demand management results.

11 At the time we had no reason to know  
12 either way whether the government of Ontario was  
13 interested in such legislation.

14 Q. Let's assume for the moment that  
15 there was such a regulation, the difference between the  
16 160 megawatts that would be achieved with the full  
17 participation and the 52 that we now estimate is  
18 approximately is 108 megawatts; correct?

19 A. Yes.

20 Q. That would be the additional savings,  
21 approximately, in the new commercial fuel saving sector  
22 which would result from using a standard of fuel  
23 switching, as opposed to the scenario you project here;  
24 correct?

25 A. These are getting to be smallish



1 numbers, but I think it is approximately correct.  
2 There is an overlap between the opportunity for  
3 efficiency improvement and fuel switching, and to the  
4 extent that you increase the fuel switching you reduce  
5 the opportunity later on to improve the efficiency in  
6 the same structure, at least the electrical efficiency  
7 in those structures. So it's not one for one, but it's  
8 pretty close.

9 Q. All right. So that, then, is the  
10 additional savings available if there was a mandatory  
11 fuel switching standard in the commercial sector?

12 A. Roughly speaking, yes.

13 Q. Okay. If I can do the same as  
14 quickly as possible for the residential sector. If I  
15 could turn you back to Exhibit 257, and no doubt you  
16 will tell me the number there is --

17 THE CHAIRMAN: Do you think we could cut  
18 through that by Mr. Burke just giving you the bottom  
19 line on these things without going through it? Is that  
20 possible? And if it ties in with what your analysis  
21 has done, then you won't worry about it too much?

22 MR. KLIPPENSTEIN: I will do even better  
23 than that.

24 Q. Mr. Burke, if you have the equivalent  
25 for the residential sector, I wonder if you could give

1 it to me, and if not I won't worry about it other than  
2 to say there is such a number. What I am asking for is  
3 your estimate of the additional savings that would  
4 result if instead of the market penetration rate used  
5 here, there was mandatory fuel switching for new  
6 residential buildings.

7 If it's too difficult, I won't ask you to  
8 spend a great deal of time on it. In fact, let me  
9 withdraw the question.

10 MR. BURKE: A. It would take me a few  
11 minutes to sort out the right number for you.

12 Q. Let's accept that there is such a  
13 quantity of savings that would be available in the  
14 residential sector if the scenario was now mandatory,  
15 fuel switching for new buildings, is that valid? There  
16 is some such number.

17 A. Yes, there is some such number.  
18 Okay.

19 Q. Given these potential savings, the  
20 approximately 100 that we referred to in the commercial  
21 sector and some quantity in the residential sector for  
22 new buildings, why has the plan changed from assuming a  
23 mandatory fuel switching with the attendant savings, to  
24 now no mandatory fuel switching and a loss of those  
25 savings?

1                   A. Well, while there is some such number  
2           in the residential sector, I think I have already given  
3           evidence as to why I don't think it was pursued for the  
4           residential sector, and that is because the market  
5           share of electricity in the gas available areas was  
6           very low, and in the non-gas areas it was felt that the  
7           introduction of the Ontario Building Code constituted a  
8           discouragement to the use of electricity as a new house  
9           heating fuel, and should people choose to use  
10          electricity at least in its application, it would be  
11          efficient.

12                   You certainly wouldn't require both, if  
13          you mandated fuel switching you wouldn't need the new  
14          Ontario Building Code. So there was felt to be a very  
15          small amount of the market that fell outside the range  
16          impact either by natural fuel switching or by the  
17          Ontario Building Code.

18                   For the commercial sector, I think the  
19          concept of regulating the fuel use in the commercial  
20          sector was a hypothetical one at the time. I think to  
21          do so would be extremely difficult in practice, and  
22          frankly, no one was interested in trying to write the  
23          regulation.

24                   It is just a very complicated matter to  
25          identify which uses of electricity are acceptable and

1 which are not, because there are clearly cases where  
2 electricity is an efficient way of dealing with the  
3 space heating needs or aspects of the space heating  
4 needs in new commercial buildings.

5 [11:20 a.m.]

6 Q. I understand that, but I understand  
7 that that category would exist in the 60 per cent,  
8 moving from potential to eligible. And again I'm only  
9 dealing with the 40 per cent which according to your  
10 own rules is in fact eligible.

11 Now you have talked about difficulty of  
12 writing regulations. Is Hydro saying that the  
13 commercial new fuel switching savings are not worth  
14 pursuing? Is Hydro saying to the government, don't  
15 bother? Is there some reason why, some other reason  
16 other than the difficulty in writing the regulation,  
17 why these potential savings are not being pursued?

18 A. I don't think Ontario Hydro is saying  
19 anything to the government. I think we have had  
20 feedback from the government that they are not  
21 interested in pursuing this sort of regulation for a  
22 lot of the practical reasons that I think I have been  
23 talking about. It's very simple to say, well, we have  
24 divided the new potential between the 60 per cent  
25 eligible and the 40 per cent that isn't. To write

1 regulations around that is in fact quite difficult.

2 Q. Has Hydro explored that possibility  
3 with the government at all? Well, let me withdraw  
4 that.

5 Were it possible to write a regulation,  
6 would it be Hydro's position that obtaining these  
7 savings which are out there would be desirable?

8 MR. SHALABY: A. I think we indicated  
9 that there is efficiency and simplicity in obtaining  
10 savings by regulation versus by incentives or by  
11 programs or by information.

12 Now there are other factors associated  
13 with imposing regulations, and I think that is where  
14 governments have to weigh the benefits of regulations  
15 in terms of capturing efficiency improvements versus  
16 whatever else regulations do to the construction  
17 industry or the appliance industry or whatever other  
18 industries.

19 So as with many decisions in the energy  
20 business, there are trade-offs and I presume that's  
21 what governments are making in deciding what  
22 regulations to pass and what not to pass.

23 Q. I understand there are trade-offs to  
24 be made and that that's the government's role. My  
25 question pertains to Hydro, which is: Has Hydro



1 indicated to the government that there are savings  
2 available there and that from Hydro's point of view it  
3 would be desirable to obtain them?

4 A. Throughout the documents that you are  
5 examining here, it is clear that identification of  
6 potential for mandation in standards is made and  
7 documented and government is aware of it.

8 Q. If I could ask you on that point to  
9 turn to attachment C, page 110. In the last paragraph,  
10 the second sentence. The statement says:

11 "Recent information on space heating  
12 fuel choice in new markets combined with  
13 a forecast of higher electricity prices  
14 relative to alternative fuels suggests  
15 that mandation is no longer appropriate  
16 or required."

17 Now I would like to focus on the words  
18 "appropriate or required". And my question is: Are  
19 those Hydro's conclusions or are those the government's  
20 conclusions?

21 I've heard comments about the difficulty  
22 of writing a regulation; I've heard comments about  
23 balancing certain factors which is the government's  
24 job. What I don't see is whether Hydro is saying these  
25 potential savings are not worth getting.

1                   A. The way I read these words, is that  
2           as Mr. Burke has gone through describing that, A, the  
3           potential for fuel switching is diminishing by revising  
4           estimates for floor space and eligibility for example;  
5           and, B, the price differential is increasing; and, C,  
6           the Ontario Building Code is being revised to include  
7           something like R2000 in the residential sector. All of  
8           these factors combined make the incremental improvement  
9           from mandation or from standards much smaller than we  
10          saw a year ago in Exhibit 258.

11                   So it's a much smaller piece of action  
12          now than we projected a year ago. The market forces  
13          appear to be stronger than they used to be a year ago  
14          in our estimation. I think that's what these words  
15          tend to indicate: that the market forces are working  
16          better and the market size is smaller.

17                   Q. So, you are suggesting that it is a  
18          matter of degree. Now the savings are smaller. We  
19          roughly arrived at the figure of 100 megawatts for the  
20          commercial sector. And are you suggesting now that it  
21          is not worth mandating because of the size of the  
22          savings?

23                   MR. BURKE: A. As I indicated earlier,  
24          it wasn't obvious that it was possible to write the  
25          legislation in such a way that it would achieve the

1 objectives set out in the scenario. It is one thing to  
2 say, let's do this. But as soon as you look more  
3 carefully at the components of the space heating market  
4 in the commercial sector, which is what we have done  
5 and one of the reasons why the eligibility for  
6 conversion went from 100 per cent to 40 per cent and  
7 you realize that you have to make all sorts of  
8 distinctions about when electricity is an appropriate  
9 use and so on for different sizes of buildings with  
10 different uses, I think it became unmanageable to write  
11 such a fuel switching regulation.

12 I don't believe it has been done anywhere  
13 else, so there is no model to go on. It was one thing  
14 to say, just ban it in new markets. But once you get  
15 into the practicalities and you realize that it's not  
16 possible to do that, that only 40 per cent of the  
17 market is really eligible for fuel switching, it  
18 becomes very difficult to actually implement. I think  
19 that for the commercial sector is what has been  
20 realized in the period of time since this document was  
21 written.

22 Q. Do you know if there are any drafts  
23 of regulations or any even outlines of the principles  
24 that would be applicable that's been attempted by  
25 either Hydro or the Ministry?

1 A. I don't know of any, no.

2 Q. So as far as you know there are none?

3 A. Yes, that's what I said.

4 Q. Thank you.

5 A point of explanation perhaps before I  
6 leave the topic. Could you give me some idea of why  
7 the drop from 100 per cent potential to 40 per cent  
8 potential or eligibility occurred? Can you explain why  
9 60 per cent of new commercial buildings in the future  
10 would not be eligible for fuel switching?

11 A. It's a complicated topic and I'm not  
12 as expert in it as I might like to be. But the  
13 analysis that was done looked at buildings of different  
14 sizes and a large number of the different heating  
15 systems that exist in those building that use both  
16 electricity and gas in many cases.

17 Our consultants essentially indicated  
18 that for certain sizes of buildings certain heating  
19 systems would continue to be chosen and that they would  
20 have a blend of electricity and gas in their use for  
21 heating purposes in various ways.

22 If it's heat recovery -- if it's heat  
23 pumps and ground source heat pumps and various other  
24 applications of electricity in combination with gas on  
25 their own for perimeter heating and so on, there just

1 turn out to be styles of buildings that will in a  
2 fairly efficient way combine electricity with gas for  
3 heating purposes and it would not be an economic  
4 decision to try to move away from those combination  
5 heating systems.

6 So that it really required a certain size  
7 of building with a certain I guess you would say  
8 inefficient use of electricity to become eligible for  
9 fuel switching. I think more detail of that issue will  
10 be in the background information forthcoming.

11 Q. That would be my next question. I  
12 would be interested in that consultant's report. If it  
13 exists, would I be able to obtain a copy of that?

14 A. I think I will have to check that it  
15 is in a form that is suitable for submitting, but I  
16 don't see why not.

17 Q. Okay. I wonder if I could have an  
18 undertaking that Hydro would review and if possible  
19 produce the consultant's report dealing with the drop  
20 in commercial new building fuel switching potential.

21 A. The consultant's report deals with  
22 the space heating systems in commercial buildings,  
23 their nature. It does not go the next step which is to  
24 derive the proportion of the stuff that is eligible for  
25 fuel switching in the future. It just shows what of



1 the heating systems today could, fuel switching which  
2 couldn't. So the projection part of it is not included  
3 in that study.

4 Q. Can you clarify for me who made the  
5 60 per cent estimate then?

6 A. Well, I'm not sure exactly whether  
7 that number is contained in the document. The heating  
8 systems and their contribution to -- what proportion  
9 each eligible heating system contributes to total space  
10 heating load, that is in the document.

11 Q. All right I would request an  
12 undertaking that you review that document and if  
13 possible produce it for me.

14 THE CHAIRMAN: Number? 25?

15 THE REGISTRAR: 940.25.

16 ---UNDERTAKING NO. 940.25: Ontario Hydro undertakes to  
17 produce the consultant's report dealing  
18 with the drop in commercial new building  
fuel switching potential.

19 MR. KLIPPENSTEIN: Thank you.

20 Q. If I could then refer you to  
21 attachment C, page 7, the last paragraph. And I won't  
22 read it except that I will paraphrase it to say that  
23 the attainable -- I seem to have the wrong reference  
24 here, but I can get the same question if I would  
25 instead refer you to the overheads, page 5.

1                   And my question is: If you could explain  
2     the difference between the previous position in Exhibit  
3     258 with respect to fuel switching and the present  
4     position that you see in the Exhibit 258 column. Fuel  
5     switching in both mandation and program forms totals  
6     the 1,275 megawatt savings, whereas in the present  
7     scenario only 880 is envisioned. Could you explain for  
8     me roughly the causes for that drop in total fuel  
9     switching savings.

10                   THE CHAIRMAN: It is 880 plus 240, isn't  
11     it, if you are comparing 1275.

12                   MR. KLIPPENSTEIN: I'm sorry, that's  
13     correct.

14                   Q. The total then drops from 1,275 in  
15     Exhibit 258 to 1,120 in the present plan.

16                   Thank you for that correction.

17                   MR. BURKE: A. Well there are a lot of  
18     factors which go into the difference between those two  
19     numbers. I would like to be able to say it is just one  
20     or two things but it isn't.

21                   In general terms the amount of new space  
22     heating load is lower, just as we discovered for the  
23     commercial sector, so that the total amount eligible  
24     for fuel switching through the marketplace or through  
25     programs is lower. By that I guess we are now looking

1 at the basic driver, like, the amount of floor space  
2 and the expected electricity use per square foot.  
3 Those numbers are lower in the 1992 forecast than in  
4 the base year forecasts used in Panel 4 which were the  
5 '89 forecasts for commercial and industrial and 1990  
6 forecast for residential.

7 Otherwise there are just a very large  
8 number of offsetting things happening here. We have  
9 introduced fuel switching in the industrial sector,  
10 where it didn't exist before, but the reductions in the  
11 commercial sector in terms of the potential have more  
12 than offset that.

13 We had various options in the residential  
14 sector. For electric water heating I think the natural  
15 amount of electric water heating fuel switching exceeds  
16 the amount that we had in the Panel 4 evidence, but the  
17 amount of space heating fuel switching because we are  
18 not including the central -- sorry, the electric  
19 baseboard heated houses as eligible any more, is much  
20 less.

21 There is literally a large number of  
22 factors that add and subtract to the totals and make it  
23 difficult for me to give you a neat comparison of the  
24 two numbers.

25 Q. Okay. I understand that. Are there

1 any other factors that you could list off the top of  
2 your head that go into the final fuel switching number  
3 that has changed?

4 A. Well --

5 Q. You have mentioned a few.

6 A. The list on page 7 of Exhibit 796  
7 gives some of the major ones. Probably the largest  
8 single one that has not come up so far is the point,  
9 the third point in the last set on page 7, where it  
10 says:

11 Conversion off electricity in existing  
12 commercial buildings now occurs upon  
13 replacement, which is less rapid than  
14 assumed in 1991.

15 We had in the 1991 Panel 4 evidence that  
16 all the conversion potential would be taken up over the  
17 decade, but that would have implied replacement of  
18 heating systems in advance of their physical  
19 obsolescence and essentially that was too fast in that  
20 scenario and has been slowed down in the evidence in  
21 attachment C of Exhibit 796.

22 Q. Are there any others you can quickly  
23 list without further explanation?

24 A. I think looking at Chapter 5 and the  
25 summary in Exhibit 796 gives a pretty good sense of the

1 major reasons why the fuel switching numbers have  
2 changed.

3 Q. All right. If I could then move away  
4 from fuel switching and ask a number of questions about  
5 EEI savings and, in general, look at why EEI savings  
6 from standards are lower than previously anticipated.  
7 An obvious place to start would be overhead package  
8 Exhibit 937, page 5, which shows a decrease in savings  
9 from EEI standards from 690 to 350. Actually a  
10 difference of 340.

11 Now, I realize that there has been a  
12 recategorization of savings from standards from the  
13 primary forecast to the basic forecast. However, the  
14 net savings from standards after that recategorization  
15 appears to be -- the difference appears to be larger  
16 than would be accounted for simply by recategorization.  
17 Can you explain that?

18 [11:40 a.m.]

19 A. Yes, I think we have discussed this  
20 already on this panel. The standards in the scenario  
21 proposed in Exhibit 258 were generic standards that  
22 assumed that 50 per cent of the remaining electrical  
23 efficiency improvement in the series east of end uses  
24 listed in the appendix to that exhibit could be  
25 obtained through standards written for those end uses.



1 We essentially went down the list of end uses for which  
2 we had EEI programs and judgmentally decided at that  
3 time which ones one might be able to write standards  
4 for.

5 So that was a very general estimate of  
6 what one might hope to save through standards based on  
7 the information we had for Panel 4.

8 What we have done now, and I indicated  
9 this in my direct, is we have worked with the Ministry  
10 of Energy for a year and they have made great strides  
11 in their standard setting procedures and many more  
12 standards are close to legislation than before. We  
13 have a better sense of their policies with regard to  
14 following U.S. standards, and so we have chosen from  
15 the list of standards those which we think are the most  
16 likely to be implemented, plus those which are already  
17 on the books and just about to be implemented, and  
18 these are the results we came too.

19 I have indicated already that in the  
20 residential sector we with exceeded the savings due to  
21 standards that were proposed in the scenario on that  
22 sort of generic basis, but that in the commercial  
23 sector we have not met the sort of savings that the  
24 generic set of standards would have suggested.

25 Q. From my rough calculations based on

1        what I can find in this evidence, it would appear  
2        possible that virtually all of that shortfall and  
3        savings from standards would be attributable to the  
4        commercial sector. Does that make sense?

5                    A. Well, yes, I think it is in the  
6        commercial sector.

7                    Q. Can I ask a bit about the process of  
8        refining or paring down the list of standards that were  
9        anticipated.

10                   I see a couple of situations, a couple of  
11        instances in the transcripts where a description occurs  
12        of the selection of what standards can be expected, and  
13        at one point I see that the standards that are most --  
14        or excuse me, that are likely to be imposed being  
15        selected, and in another place in the transcripts I see  
16        reference to highly likely as a criteria, and the page  
17        references 30403 and 30417. I don't want to read a  
18        preciseness into those words that isn't there.

19                   Can you tell me, what was the criteria  
20        for saying that this standard is not likely enough to  
21        be imposed and therefore we will now remove it from our  
22        projection?

23                   A. Well, first of all, it wasn't a  
24        question of removing it from the projection. As I have  
25        indicated, we never had specific standards in the

1 projection. We had this generic --

2 Q. Fair.

3 A. So we were essentially building from  
4 scratch. There is a long list that the Ministry of  
5 Energy has constructed of possible standards.

6 As I have said, the judgment remained  
7 ours as to which standards to include in the load  
8 forecast, although the judgment was essentially based  
9 on the likelihood of being implemented as we understood  
10 it in discussion with the Ministry of Energy officials.

11 If it helps you at all, the number that  
12 the person that worked on this suggested, it was Dr.  
13 Buja-Bijunas who was a witness on Panel 1 here,  
14 suggested would reflect the probability of  
15 implementation and she was using 70 per cent likelihood  
16 of being implemented over the next 10 years.

17 No, I shouldn't say that. 70 per cent of  
18 being implemented on the schedule which we have  
19 indicated in this forecast.

20 So, there differently are judgments. The  
21 nature of standards are such that people could change  
22 policy about standards and cease to proceed with them  
23 on the schedule that we have, they could even rescind  
24 them, I suppose, but we have assumed that the standards  
25 follow the pattern that is currently being set.

1 Q. All right, thank you, that's helpful.

2 Still on the question of standards, could  
3 I refer you to attachment C, page 37, the last  
4 paragraph. The third last sentence says:

5 There may be room for more aggressive  
6 standard-setting than already in the  
7 basic.

8 Has Hydro identified any standards which  
9 are in the next rank of probability? Is Hydro  
10 including in any way in these forecasts a contingency  
11 for possibly more aggressive standards of the nature  
12 referred to in here?

13 A. The standards we have included are  
14 the ones that we have talked about and are in the  
15 document.

16 I think what that sentence is indicating  
17 is that, as we just came to a few minutes ago in the  
18 commercial sector, the standards that were identified  
19 in the scenario as generically conceivable, to a large  
20 extent have not been followed through with, and it's  
21 not clear that we have come to the end of the loop on  
22 that, that it is possible that if one could revisit the  
23 use for those end uses. I don't have a position on  
24 whether that's likely to happen or not. But certainly  
25 there were areas where we identified standards where

1 the opportunities do not seem to have been taken up,  
2 and they are largely in commercial lighting. So I  
3 think there is a potential there, yes.

4 Q. Thank you. Would I be able to obtain  
5 from you a copy of the list of possible standards that  
6 you referred to earlier?

7 A. I'm not sure -- what we were talking  
8 about, when I talked about a list of possibility  
9 standards, I believe is a Ministry of Energy listing.  
10 I am not sure how descriptive it is of the content of  
11 the standards and I am not sure whether they would be  
12 happy with releasing it.

13 If you are asking for what standards we  
14 have included, indications of the them are provided in  
15 chapter 3 of attachment C to Exhibit 797, and there  
16 will be more detail certainly about those standards in  
17 the supporting documents.

18 Q. Thank you with respect to the list I  
19 mentioned earlier.

20 I would appreciate a list of the  
21 standards that are in fact assumed for purposes of this  
22 forecast, and I have looked at the information already  
23 provided, but it doesn't provide information such as  
24 the levels of efficiency expected in refrigerators,  
25 just to pick an example of the many possible examples.



1 Would I be able to obtained a list of the actual  
2 specific numerical assumptions made in terms of  
3 standards?

4 A. It's my understanding that that will  
5 be included in the residential end use documentation  
6 that we have said is coming.

7 Q. Are there any such standards assumed  
8 for commercial or industrial sectors at all? I would  
9 request those if they are not included.

10 A. The commercial standards are as  
11 described in attachment C, application of ASHRAE 90.1.

12 Q. If I can just give you an example of  
13 why I am asking. If you turn to attachment C, page 79,  
14 there are commercial standards referred to for  
15 implementation in 1996 for fractional motors but I  
16 don't know what the content of those standards is. I  
17 don't know whether they are conservative, aggressive,  
18 or exactly what they are, and that would be of  
19 assistance to me. And the same applies for the rest of  
20 that list, and I assume that such a list exists or --

21 A. Yes, it does. I will include it in  
22 the commercial and industrial reports as well.

23 Q. Just to be clear, what I would like  
24 to know is, if I look at your list of standards and I  
25 see an entry for a range in whatever sector, I would

1 appreciate knowing what is the level of efficiency that  
2 you are assuming for that range in that standard, just  
3 to pick an example.

4 A. Well, just so that I am clear. In  
5 order to do the load forecast we have to use specific  
6 numbers, and standards, when they are written, cover  
7 all manner of instances, and so we have had to pick  
8 specific numbers and it's the specific number I can  
9 give you. I cannot give you the standard, our version  
10 of what the standard would look like. That's a major  
11 document.

12 What I can give you is what we have  
13 assumed on average the impact of the standard will be  
14 for a particular piece of equipment.

15 Q. Is there any way I can find out how  
16 that figure that Hydro uses was arrived at, since there  
17 seems to be a missing link there that I don't have the  
18 ability to --

19 A. In many cases the standards aren't  
20 written, so you can't find that out. It is our  
21 estimate of what the standards impact will be.

22 Q. So you may have estimated the impact  
23 without necessarily putting in writing what the content  
24 of the regulation would be expected to be?

25 A. No. The ASHRAE 90.1 is this thick.

1 I mean...

2 Q. The ASHRAE 90.1 is a special case.

3 I look again at the example of fractional  
4 motors here. Would you have just said we expect the  
5 regulation in 1996 and we expect the impact to be X, or  
6 would you say we expect the regulation to be  
7 approximately this and therefore the impact would be X?

8 A. We would have said something like we  
9 expect an 8 per cent improvement in efficiency or  
10 something like that, in motors of this size.

11 Q. All right, thank you. And that would  
12 be based on the aggregation of all such motors. You  
13 wouldn't have said we expect a motor to be this much  
14 more efficient, a new motor to be -- perhaps it amounts  
15 to the same thing.

16 A. No. The standard refers to the new  
17 equipment, and then we use the models to tell us what  
18 the overall impact is. The results of that impact is  
19 given in chapter 3.

20 Q. All right. Can I turn to the issue  
21 of forecasting of standards, and perhaps I could ask  
22 you to turn in attachment C to page 65, table 3.1.4. I  
23 see a list of some 20 or so technological applications  
24 with a list of when changes in standards are expected,  
25 now I can find only three examples of regulatory

1 changes after the year 2000. Does this mean that for  
2 purposes of this forecast the assumption in effect is  
3 that there will be no more aggressive standards after  
4 the year 2000 other than these few examples?

5 A. We have come a long way since Panel  
6 1. In Panel 1 we weren't prepared to look more than at  
7 the standards that have already been implemented. And  
8 the only ones we are prepared to go into the future on  
9 are for technologies where the U.S. has indicated a  
10 schedule of standard-setting that we expect the  
11 Province of Ontario to follow. Any forecast of a  
12 standard beyond about five years in the future I think  
13 is being fairly bold in trying to get a handle on where  
14 that process will go.

15 Q. Allow me to take that point, which I  
16 understand, and compare it to the evolution of the  
17 technology itself as opposed to the standards, and if I  
18 can could refer to you opposing page, page 64, and the  
19 second last paragraph. The third sentence says:

20 Savings increase at a decreasing rate  
21 because in the absence of standards  
22 efficiency improvements are assumed to  
23 take place on a continuous basis.

24 Could I also ask you to turn a few pages  
25 to page 75, to the last paragraph, and the second last

1 sentence which says:

2 Decreases in the impact of standards  
3 toward the end of the forecast are due to  
4 natural energy efficiency improvements  
5 that take place on a continuous basis.

6 Now, am I correct in observing that there  
7 is a built-in assumption that natural technological  
8 efficiency increases throughout the forecast period,  
9 but there is no symmetrical assumption about the  
10 increase in the efficiency requirements as standards?

11 A. Yes. Standards are treated as a  
12 piece of government regulation which the market may  
13 catch up to, but that don't automatically get triggered  
14 because the level of efficiency in the marketplace is  
15 encroaching on the level legislated by the standard.  
16 In other words, yes, it is possible for standards to be  
17 to become obsolete in this forecast and we have not  
18 necessarily said how they would be replaced, especially  
19 as we get beyond the turn of the century.

20 Q. But you have not assumed that  
21 efficiency improvements will stop or indeed slow down;  
22 that continues throughout.

23 A. That's correct.

24 Q. Would it not have been within the  
25 range of reasonableness to make a symmetrical



1 assumption with respect to standards to the one you  
2 make for natural efficiency improvements, and have  
3 assumed standards beyond the year 2000 that were in  
4 line with the trend before that period. That would  
5 have been within the range of reasonableness, do you  
6 agree?

7 A. Well, no, I guess I don't. It's  
8 difficult enough to be specific about the technological  
9 trends for efficiency that remain in existing equipment  
10 beyond the year 2000, especially as you head out toward  
11 the end of the forecast horizon.

12 Essentially, what one is assuming with  
13 standard-setting is that it is possible, technically  
14 possible that someone has done some analysis that  
15 suggests that it's technically possible for a piece of  
16 equipment's efficiency to exceed the level that the  
17 marketplace is delivering, and therefore by introducing  
18 legislation guide the marketplace to that efficiency  
19 level.

20 We don't know the extent to which further  
21 technological improvements are possible beyond the  
22 trends of the marketplace as we get out that far in the  
23 future. So we are not in a position to always assume  
24 that there is more to be gained through ever-increasing  
25 efficiency standards.

1 Q. All right, thank you. I have your  
2 answer.

3 Mr. Chairman, I have approximately 15 or  
4 20 minutes more of cross-examination and I understand  
5 Mr. Campbell has made a...

6 MR. LANE: Mr. Chairman, I recognize that  
7 it was Mr. Campbell's request that we stop at noon, but  
8 if there are 15 more minutes of cross-examination or  
9 so, and it pleases the Board, we would be content to  
10 continue.

11 THE CHAIRMAN: You can continue.  
12 [12:00 p.m.]

13 MR. KLIPPENSTEIN: Thank you.

14 Q. I would like to ask a number of  
15 questions about the role of Hydro in the development of  
16 standards. There are several references in the  
17 transcripts and you don't need to turn them up but they  
18 occur at 30402 and 31152 and elsewhere that talk about  
19 collaboration between the government and Hydro in the  
20 development of standards, joint work, and such terms.

21 I assume that that is a role that Hydro  
22 considers legitimate and would consider continuing into  
23 the foreseeable future; is that correct?

24 MR. SHALABY: A. Yes.

25 Q. And am I correct in assuming that one

1 reason that that is a useful role is that Hydro in fact  
2 has expertise related to standard setting perhaps to a  
3 greater degree than the government in some areas and  
4 has possession of some of the information required for  
5 setting standards, to a greater degree than the  
6 government does?

7 A. I think Hydro has the expertise, I  
8 wouldn't say in standard setting, but perhaps in  
9 identifying the benefits of various levels of  
10 standards; awareness of standards being set elsewhere  
11 in the United States. The particular expertise we get  
12 is from knowledge of the products and from identifying  
13 the value of standards in saving electricity.

14 Q. Would it be fair to say that Hydro  
15 has a constructive role to play in identifying areas  
16 that might be right for standards?

17 A. Yes.

18 Q. Would it be fair to say that Hydro  
19 has a role to play in comparing the effects of  
20 standards versus market forces versus other forms of  
21 demand management and comparing the effects of the  
22 various alternatives.

23 A. From certain perspectives to do with  
24 the electricity system and our customers.

25 Q. One feature of this forecast as

1 revised is the recategorization of savings from  
2 standards from demand management to relocating them, if  
3 you will, in the basic load forecast. Am I  
4 understanding that correctly?

5 MR. BURKE: A. It's not a feature of  
6 this forecast, no. We have always included the effect  
7 of well-defined standards in the basic load forecast.  
8 What happened was that between Panel 4 and Panel 11  
9 generic standards became better defined so that's where  
10 they ended up.

11 Q. You're correct. Thank you for that  
12 correction. I don't want to get into a battle of  
13 definitions, but I have seen the demand management  
14 outside of the basic forecast referred to as  
15 "Hydro-induced" or similar wording would suggest that  
16 those are what Hydro controls, whereas, the elements in  
17 the basic forecast are not those elements that Hydro  
18 controls.

19 Assuming that's roughly correct, can I  
20 take it that the categorization of standard savings in  
21 the basic load forecast would not be a detraction from  
22 the role of Hydro in standard setting which we have  
23 just discussed such as identifying areas for potential  
24 standard setting?

25 A. I think just the way we have laid out

1 the evidence on page 5 of Exhibit 937 indicates that we  
2 consider the role of standards to be a part of the  
3 demand management effort and that the definitions that  
4 we have introduced from the load forecast side for  
5 basic and primary don't necessarily define what is  
6 demand management and where Hydro has a role. And I  
7 think in Panel 4 we made it quite clear that Hydro had  
8 a role in standard setting.

9               Somewhere in this attachment C, I point  
10 out that the definition that the corporation used in  
11 Exhibit 3 for what was demand management did not  
12 necessarily correspond exactly to the difference  
13 between basic and primary. So what Hydro sees as its  
14 demand management efforts is the sum of the things as  
15 shown on page 5.

16              Q. All right. Thank you.

17              Still on that topic. During the direct  
18 examination of this panel, an answer was given - and  
19 I'm sorry I can't identify by whom - at page 30402 and  
20 I will read the sentence to you. If you care to turn  
21 it up. It may not be necessary to do so.

22              The statement was made:

23                       Since the concept of basic load was  
24                       introduced, efficiency standards have  
25                       been treated as if they were a market



1 force.

2 The statement is a little bit ambiguous.  
3 I can take it from our discussion that in fact Hydro is  
4 not treating standards as an outside independent market  
5 force but in fact is something that Hydro does have an  
6 effect on?

7 MR. BURKE: A. I think we can encourage  
8 and so on, inform government, but standards are  
9 regulated by government. Government could regulate  
10 standards that Hydro disagreed with entirely. All of  
11 that is possible so it's a force that we do not control  
12 literally. We may influence.

13 Q. Thank you. I just have a number of  
14 questions of a clarification nature and if you could  
15 turn to the executive summary to the top of page 8.

16 The statement is made that:

17 Additional EEI measures were  
18 identified and included.

19 Can you clarify that and perhaps if  
20 possible tell me where I could find out which of those  
21 were identified.

22 A. On page 113 of attachment C, in the  
23 first complete paragraph on the page, it gives the  
24 major new technologies that were added to the  
25 residential forecast.

1                   On page 115, in the second paragraph of  
2                   section 5.2.2 on the commercial sector, it lists the  
3                   additional lighting technologies in the third sentence.  
4                   I don't believe there are technologies other than  
5                   lighting added and I don't believe there are changes to  
6                   the industrial sector.

7                   Again I think you will find more detail  
8                   in the document on the net load impact that expands on  
9                   Chapter 5 of this forecast that appears, but those are  
10                  the major new technologies in the two places I have  
11                  highlighted.

12                  Q. All right. Thank you.

13                  And if I could then for the next item of  
14                  clarification turn to the executive summary, page 7.  
15                  Bullet No. 3 in the bottom section of the page refers  
16                  to conversion from electricity occurring less rapidly  
17                  than assumed in commercial buildings. And you  
18                  addressed that to some extent earlier.

19                  Will there be some further more detailed  
20                  explanation of that in the forthcoming documentation to  
21                  describe your assumptions on that point?

22                  A. Well, I don't think there is a whole  
23                  lot more to be said. But I believe it is described in  
24                  Chapter 5 to some extent. It is simply that instead of  
25                  as in the scenario in Panel 4 all existing buildings

1 that were eligible for fuel switching, all those loads  
2 were assumed -- the potential for all of that was  
3 assumed to exist by the year 2000. Now it occurs upon  
4 replacement which is at a 5 per cent per year rate. So  
5 the additional piece of information is that it occurs  
6 over 20 years instead of over 10 years as in Exhibit  
7 258.

8 Q. Was there new information or a change  
9 in circumstances that caused that adjustment in  
10 assumptions?

11 A. I think we were just too eager at the  
12 time we made the projection.

13 Q. All right.

14 One final question. We referred earlier  
15 to a list of possible standards that the Ministry of  
16 Energy may or may not have. Would it be possible for  
17 you to request that from the Ministry of Energy?

18 THE CHAIRMAN: Well, the standards you  
19 can request as well as they can. So, if the Ministry  
20 of Energy has a problem with the document, then they  
21 will probably tell you.

22 MR. KLIPPENSTEIN: I'm certainly willing  
23 to make the request. It just occurs to me that perhaps  
24 the Ministry might be more inclined to grant it if was  
25 Hydro requesting it.

1 THE CHAIRMAN: Well, it would have to be  
2 done in the context it was going to you in any event,  
3 so I think their response probably would be the same in  
4 either case.

5 MR. KLIPPENSTEIN: All right. I will  
6 just move on that basis.

7 Those are all my questions. Thank you  
8 very much, members of the panel. And thank you, Mr.  
9 Chairman.

10 THE CHAIRMAN: Thank you.  
11 We will adjourn now until one-thirty.  
12 And Mrs. Mackesy, you're next; is that  
13 correct?

14 MRS. MACKESY: Yes.

15 THE REGISTRAR: Please come to order.

16 This hearing is adjourned until 1:30.

17 ---Luncheon recess at 12:15 p.m.

18 ---On resuming at 1:30 p.m.

19 THE REGISTRAR: This hearing is again in  
20 session. Please be seated.

21 THE CHAIRMAN: Mrs. Mackesy.

22 MRS. MACKESY: Thank you.

23 Mr. Chairman, I have given the clerk and  
24 Ontario Hydro copies of a package of miscellaneous  
25 cross-examination materials and I have placed extra

1 copies on the table at the front of the room for those  
2 who wish to follow. Could I have an exhibit number for  
3 it, please.

4 THE REGISTRAR: That will be 1051, Mr.  
5 Chairman.

6 ---EXHIBIT NO. 1051: Background materials used by F.  
7 Mackesy in cross-examination of  
Ontario Hydro Panel 11.

8 THE CHAIRMAN: Thank you.

9 CROSS-EXAMINATION BY MRS. MACKESY:

10 Q. Now my first questions are about the  
11 meanings of some abbreviations in attachments to  
12 Exhibit 796. And would you turn to 796, attachment B,  
13 please. And the first one is on page 19.

14 This is in the third paragraph, the third  
15 line. At the end of line it mentions "coupled with the  
16 overall effects of the branch CQI program".

17 What does CQI stand for?

18 MR. SNELSON: A. I don't think I have  
19 the right reference.

20 Q. I'm sorry, it's 796

21 THE CHAIRMAN: It is attachment A --

22 MRS. MACKESY: No.

23 MR. SNELSON: Oh, attachment A. I was in  
24 attachment E.

25 MRS. MACKESY: Q. B.



1 MR. SNELSON: A. B?

2 Q. That's correct.

3 THE CHAIRMAN: But it is Appendix A to  
4 attachment B and it's the page that starts off at the  
5 top "Nuclear Performance".

6 MR. SNELSON: I believe the initials  
7 stand for continuous quality improvement program.

8 MRS. MACKESY: Q. Thank you.

9 And the next one is page 21 and it is in  
10 the second paragraph -- actually the third line from  
11 the bottom of the page, Encon, E-n-c-o-n.

12 MR. SNELSON: A. Encon is the name of a  
13 branch of Ontario Hydro and it's a collapsing of  
14 engineering and construction services.

15 Q. Thank you.

16 And the last items are on an unnumbered  
17 page a couple of pages on under the heading "Integrated  
18 Plan". Do you have that?

19 A. Yes.

20 Q. All right. And it is under the  
21 section headed "Delivery". There are a number here.  
22 The first one is TSP.

23 A. That stands for transmission system  
24 planning.

25 Q. And in the line following that the

1 letters RSP.

2 A. That stands for regional supply  
3 planning.

4 Q. Thank you. And just before that the  
5 abbreviation is Cap Mods. What would that be?

6 A. That is an abbreviation for capital  
7 modifications.

8 Q. Thank you. And what does the retail  
9 at the end of the line refer to?

10 A. It refers to the retail delivery  
11 system of Ontario Hydro.

12 Q. Thank you very much. That's that  
13 section completed.

14 Now I'm now going on to some questions on  
15 rates. Would I be correct in thinking, Mr. Snelson,  
16 that your direct evidence in Volume 174 at pages 30384  
17 to 30385 would be an explanation of what Ontario Hydro  
18 describes as the unprecedented reaction of customers to  
19 the increase in rates?

20 THE CHAIRMAN: You have the volume number  
21 for that?

22 MRS. MACKESY: Yes, 174.

23 THE CHAIRMAN: Thank you.

24 MR. SNELSON: Yes.

25 MRS. MACKESY: Thank you.

1 Q. And how did the electricity rate  
2 increases compare to general inflation during the 1970s  
3 and 1980s?

4 MR. BURKE: A. Electricity rate  
5 increases, broadly speaking, were constant in real  
6 terms between about 1978 and 1989. In 1976 and '77  
7 there was about a 25 per cent real increase in those  
8 two years; and prior to that, electricity rates were  
9 generally declining in real terms.

10 Q. What about in the terms that, the  
11 nominal terms that....

12 A. I guess I don't remember the numbers  
13 in those terms, but inflation over the 80s averaged  
14 about 6 per cent, I think. In the period of time in  
15 which the electricity rates increased about 25 per cent  
16 in real terms, inflation was much higher. I think  
17 inflation would have been around 10 or 11 per cent in  
18 each of those years. So that I believe there was  
19 nearly a 50 per cent nominal increase over the two-year  
20 period in '76 and '77.

21 [1:40 p.m.]

22 MR. SNELSON: A. Mr. Dalziel is pointing  
23 out that attachment E to Exhibit 796 --

24 Q. Attachment E as in Edward?

25 A. E as in Edward. On page 35 has a

1 table of nominal electricity prices going back to 1971.

2 Q. Thank you. And my next question is  
3 regarding customer attitudes. Is customer attitude  
4 towards rates the primary influence on electricity  
5 planning?

6 A. No. It's an important influence but  
7 it's not the primary influence.

8 Q. I sort of had the impression from the  
9 evidence given on this panel that it was at this time.

10 A. Well, we have indicated that it has  
11 taken increased importance in the last while. So it is  
12 definitely of increased importance because of the  
13 reaction of customers to the rates and to the rate  
14 projections.

15 Q. If there is a primary influence, what  
16 would you say that was?

17 A. I don't know that you can isolate one  
18 primary influence. There are many influences on  
19 planning and they all have to be taken into account.

20 Q. Okay. Could you briefly outline some  
21 of the many?

22 THE CHAIRMAN: In the other earlier  
23 panels we had the Demand/Supply Planning Strategy and  
24 then there are the strategic directions. As I  
25 understand the evidence, those are still in place, are

1       they?

2                   MR. SNELSON: That's correct.

3                   MRS. MACKESY: Thank you.

4                   Q. Going on to electricity demand, in  
5 Ontario Hydro's opinion have the rate increases of  
6 recent years contributed to a lower rate of increase in  
7 electricity demand?

8                   MR. BURKE: A. Yes.

9                   Q. Can you say to what degree they would  
10 have contributed to that?

11                  A. The price elasticities were evidenced  
12 in Panel 1 and they still are in effect.

13                  Do you need more detail than that?

14                  Q. No, that gives me enough to follow  
15 through on.

16                  Now, my next questions relate to  
17 industrial rates, and would you please turn to page 2  
18 of my package, please. This is an article from the  
19 Globe and Mail of December 18, 1992, and it is headed  
20 Manitoba Scraps Power Dam Project. Now, the section  
21 which I am going to read is in the fourth column and  
22 it's underlined, and unfortunately the underlining  
23 covers part of the wording so I will read it into the  
24 record.

25                  "Cash-strapped Ontario Hydro wants to



1 increase its exports of power and sell  
2 cut-rate electricity to selected  
3 industries in a bid to raise revenues, he  
4 said."

5 This refers apparently to a statement Mr.  
6 Strong of Ontario Hydro gave at a news conference.

7 Now, can anyone on the panel confirm  
8 whether it is part of Ontario Hydro's plan to sell  
9 cut-rate electricity to selected industries to raise  
10 revenue?

11 MR. SHALABY: A. The word "cut-rate" I  
12 think is where I am taking time to look at. We do sell  
13 electricity to industry. We have a variety of rates  
14 that we offer to industry, including, for example, the  
15 interruptible rates or the discount demand service.

16 Q. It would appear from this article  
17 that this is going to be a decrease in what you have  
18 now. If you took it to mean that, do you have any  
19 plans for further reducing the rates?

20 MR. SNELSON: A. Maybe I can put some  
21 context here.

22 I believe I saw a tape recording of the  
23 conference that is being reported here, and it seemed  
24 to me that Mr. Strong was discussing the issue of  
25 surplus capacity and he gave some potential ideas as to

1 ways in which it might be addressed, that the surplus  
2 capacity might have some opportunities associated with  
3 it to encourage economic development. I think that was  
4 some initial ideas that Mr. Strong had and that is not  
5 as yet part of our programs and we don't know whether  
6 it will become part of our programs. It was just a  
7 philosophizing around the potentials that might be  
8 there.

9 Q. Thank you. And now page 3 of my  
10 exhibit, 1051, is the page I believe you referred to  
11 before, page 35 from attachment E of 796. And is it a  
12 correct interpretation of that table to say that large  
13 industrial users, that is those using over 5,000  
14 kilowatts, already pay less per kilowatthour than  
15 industrial users with smaller loads?

16 MR. BURKE: A. That's the property of  
17 our rate schedule, it's been in existence for a long  
18 time.

19 Q. Thank you. Now, this question arises  
20 out of Energy Probe's questions regarding what they  
21 called the price demand spiral. In a situation where  
22 some customers are moving away to generation or to  
23 self-generation, or to purchasing power from third  
24 parties, leaving the remaining customers to bear the  
25 fixed costs of the system through higher rates, is it

1 correct that the people who are left on the system do  
2 pay higher rates?

3 A. Yes. Essentially our rates are  
4 average rates, so that the total costs are divided by  
5 fewer units of sale.

6 Q. Now, if that should lead to  
7 complaints from those who are left on the system to  
8 bear the fixed costs, what reply would Ontario Hydro  
9 have for them to their complaints?

10 MR. SNELSON: A. Well, I think it is  
11 causing some cause for complaint among customers, and  
12 Ontario Hydro is taking as strong an action it can to  
13 reduce the fixed costs, because the fixed costs are  
14 only fixed in some senses. All of the costs over some  
15 time period can be adjusted to reflect the new  
16 circumstances.

17 Q. But supposing it reaches a point  
18 where they can't be adjusted and they remain high, what  
19 recourse do the customers have who are left on the  
20 system? Or are you saying that it will eventually all  
21 work out?

22 A. We are undertaking strong action to  
23 try and keep the costs down so that the rates will be  
24 at or below the rate of inflation.

25 The current projection which the load

1 forecast was based did show some rates going up for a  
2 while, but that is something which is being examined at  
3 the moment and there may be further actions taken.

4 Q. Could that have an effect on the type  
5 of mitigation you offer to people who host new  
6 facilities, such as transmission lines that are built,  
7 as an attempt to keep the costs down?

8 A. Cost pressures are affecting our  
9 program for new facilities, and so we have delayed  
10 facilities and we have cancelled some facilities.

11 I don't know of any cost pressures at the  
12 moment that would cause us to do a less good job in  
13 building facilities when they are required and when  
14 they are needed.

15 Q. I'm not disagreeing that you might  
16 want to build them and actually build them, but  
17 supposing there were a difference of opinion as to the  
18 type of mitigation that should be provided.

19 MS. HARVIE: Well, Mr. Chairman, I think  
20 the witness has answered the question. He clearly  
21 stated that any increased cost pressures on Ontario  
22 Hydro, he doesn't know of any circumstances that would  
23 now cause Hydro to do a less good job of building the  
24 facilities, and I think the answer has been provided.

25 THE CHAIRMAN: Mr. Snelson, that would

1 include your approach to mitigation; is that correct?

2 MR. SNELSON: That is correct. In my  
3 mind that includes the approach to mitigation.

4 MRS. MACKESY: Thank you.

5 Q. Now, the Globe and Mail article also  
6 mentions exports. Would you please turn to page 6 of  
7 my cross-examination package. Now this is an  
8 interrogatory that I submitted sometime ago for Panel  
9 2, and in it I asked whether there was a forecast of  
10 exports, and the reply reads:

11 "Ontario Hydro does not build new  
12 generation for export, therefore in the  
13 long-term planning for the Demand/Supply  
14 Plan exports sales are not generally  
15 considered. However, allowance is made  
16 for sales of nuclear energy when it is  
17 surplus to Ontario needs (See page 16-5  
18 of the DSP report). The forecast of the  
19 volume of these sales of surplus nuclear  
20 is small. In the case of the median load  
21 growth, the sales of surplus nuclear  
22 would be less than 1 per cent of the  
23 annual electricity demand."

24 I should have said at the beginning  
25 before I began reading that, that this is Interrogatory



1 2.29.2.

2 THE CHAIRMAN: It will have the  
3 distinction of being the first interrogatory that goes  
4 into this Panel 11 cross-examination.

5 If we can have an exhibit number for it?

6 THE REGISTRAR: That will be 1052.1.

7 THE CHAIRMAN: Thank you.

8 ---EXHIBIT NO. 1052.1: Interrogatory No. 2.29.2.

9 MRS. MACKESY: Q. Now, in attachment B,  
10 B as in Bob, to 796, Appendix A, page 15, at the bottom  
11 the page, there was also a reference to electricity  
12 export sales, and it reads:

13 This is a potential source of  
14 additional revenue that could help to  
15 reduce rates.

16 Has there been any change based on that  
17 to what the answer was in Interrogatory 2.29.2?

18 MR. SNELSON: A. No. The interrogatory  
19 2.29.2 is talking about the long-term situation as it  
20 was discussed in Exhibit 3, and it is referring to the  
21 influences that would cause us to build new generation  
22 or to require new demand management options.

23 The reference at the bottom of page 15 is  
24 referring to the situation during a period of capacity  
25 surplus when there may be some opportunities to sell

1 some of that. But it is still the case that we would  
2 not be looking for sales that would drive us into a  
3 capacity shortage that would require to us build  
4 generation or to have more demand management programs  
5 and so on.

6 Q. What I was wondering was, with  
7 relation to exports and also with relation to the just  
8 philosophical suggestion of cut-rate electricity prices  
9 for industry, would this lead to increased demand from  
10 industry or perhaps from export markets which would  
11 require the building of new generation sooner than it's  
12 anticipated?

13 A. Well, with regard to exports, the  
14 answer is certainly no, because export sales are made  
15 on a utility to utility basis, they are time limited  
16 according to the period that you are sure you have the  
17 power for sale, and our policy is not to commit  
18 ourselves to long-term sales that would cause us to  
19 build new generation or even to advance the need to  
20 build new generation.

21 Q. Okay. I was wondering, I am not  
22 familiar with the terms of the free trade arrangements  
23 that have been made between Canada and the U.S., but I  
24 heard of a proportionality clause whereby it would be  
25 difficult for Canada to cutback on sales, on export

1 sales of energy. Would that affect...

2 A. I am not an expert on the U.S./Canada  
3 Free Trade agreement, but my understanding is that the  
4 type of agreements that we anticipate, and we do  
5 conduct on a regular basis for -- the sale and purchase  
6 of electricity go both ways, and we are not talking  
7 here about long-term firm arrangement; we are talking  
8 about shorter-term arrangements, that there is no  
9 problem in that regard.

10 Q. Thank you. Now, my next questions  
11 have to do with fossil fuels and emissions. The first  
12 question relates to the overhead Exhibit 793, page 18.

13 THE CHAIRMAN: I think it is 797, the  
14 overhead.

15 MRS. MACKESY: 797, is it? I'm sorry.

16 THE CHAIRMAN: I'm sorry, we are both  
17 wrong. It's 937.

18 MRS. MACKESY: 937, yes. I'm sorry.

19 Q. Page 18. Now, do these charts  
20 illustrate the emissions just from Ontario Hydro-owned  
21 generation, or does it include the NUGs that are  
22 projected in the illustrative plans?

23 MR. DALZIEL: A. The emissions shown on  
24 page 18 reflect just Ontario Hydro emissions.

25 Q. Just Ontario Hydro, I see. Okay.

1 And I have a question arising out of  
2 AECL's cross-examination yesterday, and I believe that  
3 someone on the panel said that the CO(2) emissions  
4 might be lower if NUG generation replaced Ontario Hydro  
5 coal generation; is that correct?

6 MR. SNELSON: A. Yes, I said that if NUG  
7 generation at a high capacity factor replaced Hydro  
8 Hydro coal-fired generation then that could reduce  
9 CO(2) emissions, yes.

10 Q. This may be too technical a question.  
11 Does that hold true if the coal generation came from  
12 IGCC plants, rather than from the current Ontario Hydro  
13 coal plants?

14 A. Yes.

15 Q. In both cases it holds true?

16 A. Yes.

17 Q. Okay, thank you.

18 And my next questions have to do with  
19 Lakeview after mothballing Units 3, 4, 7 and 8, and  
20 does that means that Units 1, 2, 5 and 6 remain in  
21 operation?

22 MR. DALZIEL: A. Yes, they do.

23 Q. Can any one on the panel give an idea  
24 of how the annual energy output from Lakeview after  
25 mothballing the four units would compare with the

1 output before the mothballing for those units?

2 A. I don't have any information on that.

3 Q. You wouldn't want to hazard a guess?

4 If you feel uncomfortable, don't.

5 A. No, I don't know.

6 Q. Now, returning to Exhibit 796B,  
7 Appendix A, page 17, please. And this is at the bottom  
8 of the page, and it relates to a comparison --

9 THE CHAIRMAN: Just a moment now.

10 MRS. MACKESY: I'm sorry.

11 THE CHAIRMAN: What page?

12 MRS. MACKESY: It's attachment B.

13 THE CHAIRMAN: Attachment B as in Baker?

14 MRS. MACKESY: B as in Baker, yes.

15 THE CHAIRMAN: All right.

16 MRS. MACKESY: Q. So it's page 17 of the  
17 appendix, and it is the sentence at the bottom of the  
18 page. This is comparing something that might be done  
19 with the Bruce "A" units as compared to Niagara. The  
20 last sentence reads:

21 Even at the lower capability factor  
22 level, capital expenditures on Bruce unit  
23 2 will be a superior investment from an  
24 economic point of view, however other  
25 factors may outweigh the economic



1 considerations.

2 What is meant by the last sentence:

3 However, other factors may outweigh the economic  
4 considerations?

5 [1:55 p.m.]

6 MR. SNELSON: A. This statement appears  
7 to be made in the context of a comparison of Bruce  
8 versus Niagara. And there are other factors besides  
9 economic considerations to come into all of our  
10 comparisons.

11 When comparing Bruce with a hydraulic  
12 plant, then there are all of the considerations  
13 surrounding nuclear power on the one hand that relate  
14 to Bruce and all the considerations about the renewable  
15 nature and so on of the resource that apply to  
16 hydraulic plants. So there are a lot of other factors  
17 besides just straight economics that come into all of  
18 our comparisons.

19 Q. That group of other factors which you  
20 are not specifying particularly that is meant by this  
21 sentence. Is that --

22 A. Yes. And part of the subject matter  
23 of the Bruce "A" review that is ongoing is to look at  
24 Bruce and look at it including the cost aspects of  
25 course but also to include other factors.

1 Q. Can you give a list of the other  
2 factors or do you have -- the other factors in the  
3 Bruce "A" review?

4 A. I don't think I could give you an  
5 exhaustive list, but the evidence through this hearing  
6 has shown that nuclear generation has many different  
7 characteristics, some of which affect costs, some of  
8 which affect the environment, some of which affect the  
9 economy and social factors, and hydraulic generation --  
10 and other options because the Bruce "A" review will  
11 look at other options as well.

12 Q. Is there any outline of what the  
13 review is covering that's available?

14 A. No, I don't believe there is. The  
15 specifics of the terms of reference and the schedule  
16 are, as far as I know, not yet finalized.

17 Q. I'm sorry, they are not yet...?

18 A. Finalized.

19 Q. I see.

20 Who determines what will be the content  
21 of the review?

22 A. Well, the review specifically was  
23 requested by the Ontario Hydro board of directors and  
24 so they will, I expect, be considering the details of  
25 the terms of reference.

1 Q. I see. Well, this then gives rise to  
2 a question that arose out of Mr. Thompson's  
3 cross-examination yesterday.

4 And I suppose I have some concern that  
5 these reviews can take on lives of their own and go on  
6 to affect people who don't know they are being affected  
7 and who aren't warned about it.

8 Yesterday during Mr. Thompson's  
9 cross-examination he raised a concern about the effect  
10 of a slowdown or a shutdown at Bruce "A" on the  
11 provision of steam to the Bruce Energy Centre. The  
12 transcript reference is in Volume 181 on pages 31660 to  
13 61.

14 I'm wondering whether anyone on the panel  
15 can say whether the review of Bruce "A" is looking at  
16 ways of substituting steam to the energy centre from  
17 Bruce "A" with steam from some other source?

18 MS. HARVIE: Mr. Chairman, our evidence  
19 on this point has been quite clear and I think it has  
20 been oft stated that we do not yet have terms of  
21 reference for the Bruce "A" review.

22 THE CHAIRMAN: Given that, is there any  
23 comment you would like to make about the steam at Bruce  
24 "A"?

25 MR. SNELSON: I don't think I can add to

1 what I said in answer to Mr. Thompson's question  
2 yesterday: that it's recognized that what is done at  
3 Bruce may have impacts on the local community, and that  
4 impacts on the Bruce Energy Centre are one of the  
5 impacts on the local community and that will  
6 undoubtedly be considered.

7 MRS. MACKESY: Mr. Chairman, I would just  
8 like to put on the record my concern about other  
9 impacts. The reason I was asking the question is it  
10 follows up something I brought up in Panel 8. At that  
11 time I introduced Exhibit 492, which was a developer's  
12 proposal for building natural gas-fired NUG's at the  
13 Bruce Energy Centre, natural gas-fired cogen NUG's to  
14 produce steam in case there were a reduction in steam  
15 available from Bruce "A".

16 This would have required the building of  
17 a pipeline to the Energy Centre and that would  
18 adversely affect agricultural and natural environments  
19 through the area the pipeline went. And the proposal  
20 could eventually have required more transmission built  
21 out BNPD area and that would adversely affect  
22 agricultural and natural environments impacted by the  
23 transmission line.

24 And this could be done instead of an  
25 on-site solution at BNPD and BEC to the proposed --

1 well, this could -- instead of looking for on-site  
2 solutions at the BNPD and Bruce Energy Centre, these  
3 proposals would involve damaging someone else's  
4 environment, and I wondered if that sort of concern  
5 would also be taken into account in the review.

6 I'm not going to ask a question about it  
7 because I don't think you can answer it, but this is  
8 the basis for my concern.

9 THE CHAIRMAN: I think that you have put  
10 on record your concern and I think that their answer is  
11 that the scope and the detail of the review is not yet  
12 known and in fact can't be known because it is going to  
13 be driven, I expect, by the people who participate and  
14 the matters which they find of interest when they do  
15 that.

16 MRS. MACKESY: I just would be concerned  
17 that these topics might be brought up and the people  
18 adversely affected might not know that this is going  
19 forward in the review.

20 THE CHAIRMAN: I understand that concern  
21 and it is a real one but it's not one, I think, that we  
22 here can deal with.

23 MRS. MACKESY: Very well. Thank you.

24 Now my next question comes from figure  
25 10-2 on page 16 of the panel overheads, Exhibit 793.



1 THE CHAIRMAN: 397?

2 MS. HARVIE: Are you referring to the  
3 overheads?

4 MRS. MACKESY: I'm sorry, 937. I keep  
5 confusing those numbers.

6 THE CHAIRMAN: We are confused about that  
7 series of numbers. 937?

8 MRS. MACKESY: 937, yes. Page 16. This  
9 is the revised illustrative plan dated December 1992.

10 Q. Now is it correct that in this  
11 illustration you are showing 1,340 megawatts plus 2,680  
12 megawatts base load of new major supply added between  
13 about 2015 and 2017?

14 MR. DALZIEL: A. I'm sorry, I didn't  
15 catch the numbers you are referring to.

16 Q. Yes, these are the numbers for the  
17 two top blocks at the top of the illustration: 1,340  
18 megawatt base load plus 2,680 megawatt base load.

19 A. Yes.

20 Q. And they're being added between 2015  
21 and 2017.

22 Now is that based on an illustrative plan  
23 where the four Bruce "A" units are going into  
24 retirement at that time?

25 A. That is in response to the retirement

1 of the Bruce "A" facilities which is beginning to take  
2 place in that time period, yes.

3 Q. Okay. If those units were not  
4 retired at that time, if they were kept in operation,  
5 would you still require that additional?

6 A. Likely not.

7 Q. Likely not?

8 A. I would say no.

9 Q. Thank you.

10 Now this question has to do with need in  
11 2017 and it relates to a statement in Volume 174 on  
12 page 30456.

13 MR. SNELSON: A. What was the page  
14 number again?

15 Q. 30456.

16 A. Thank you.

17 Q. And it's between lines 9 and 14. Let  
18 me just read that into the record:

19 Basically just to summarize. By the  
20 end of the plan period, the requirement  
21 for new major supply reached about 10,800  
22 megawatts in the year 2017. That's  
23 without the Manitoba Purchase and this is  
24 about 2,300 megawatts more than the  
25 requirement described by Panel 10.

1 And my question is how much of that 2,300  
2 megawatts is the result of the cancellation of the  
3 Manitoba Purchase.

4 MR. DALZIEL: 1,000 megawatts.

5 Q. 1,000.

6 And can you give me some idea of what is  
7 the cause of the extra 1,300 megawatts?

8 A. I believe that would be attributed to  
9 the increase in the 20-minute peak primary demand.

10 Q. Would that be concentrated in any  
11 particular part of the province?

12 MR. BURKE: A. I don't think we could  
13 say that at this point.

14 Q. Thank you.

15 I have some questions with regard to the  
16 current status of licensing at Bruce "A". Can any one  
17 confirm that they were licensed by the AECB in November  
18 for just a six-month period?

19 MR. SNELSON: A. I'm afraid that we are  
20 not fully aware of the details of the licensing  
21 considerations. That's not something we normally  
22 become aware of.

23 Q. Thank you.

24 This may also be too technical a  
25 question. There have been questions about the effect

1 of closing Bruce "A" on the need date for new supply.  
2 Can any one on the panel say whether it's possible to  
3 take nuclear plant part way into a shutdown process and  
4 then bring it back again into an electricity production  
5 state?

6 A. In some circumstances that is  
7 possible.

8 Q. So then even if the plant were  
9 described as being shut down, that does not mean that  
10 at some time in the future you wouldn't be able to get  
11 generation out of it; you could bring it back if it  
12 hadn't gone too far into the process?

13 A. I think you do have to have in the  
14 back of your mind, you have to make decisions at the  
15 time you close down the operation that you want to  
16 provide for future operation and that you will  
17 undertake measures to prevent the deterioration of  
18 equipment during the period of shutdown.

19 Q. Thank you. Now my next questions are  
20 on the transmission. And I may be wrong about this but  
21 I got the impression from the direct evidence given in  
22 Volume 174 at pages 30444 to -47, that you were being  
23 very cautious about saying anything about change in  
24 transmission planning. Would that be correct?

25 A. I'm certainly not in a position to

1 speculate about changes in transmission plans that  
2 haven't yet taken place and that the transmission  
3 studies and changes to the plans that would result from  
4 the cancellation of the Manitoba Purchase and from the  
5 change in the load forecast in December, recognizing  
6 that those two events at the December board meeting  
7 took place just a handful of working days before we  
8 were on the witness panel, then we are not in a  
9 position to give you details of how those changed  
10 transmission plans.

11 Q. So you also then would not be in a  
12 position to make any assessment of the changes that  
13 these plans would bring about to the natural and social  
14 environment?

15 A. No.

16 Q. Thank you.

17 Have you any idea of when those studies  
18 would be complete?

19 A. I think I was asked that question.  
20 And as I recall it, I didn't give a specific answer,  
21 except that the studies may be completed at different  
22 times for different parts of the transmission system.  
23 It may not be a single sort of release of one  
24 comprehensive study; there will be studies for  
25 different parts of the transmission system and they may



1       come out at different times.

2                   Q. Now attachment I refers to five  
3       transmission situations. Might the December 19, 1992  
4       decision cause changes in other transmission situations  
5       over and above those specified in attachment I to  
6       Exhibit 796?

7                   A. The change with respect to the  
8       Manitoba Purchase will mainly affect interregional  
9       transmission flows and those are the ones that are  
10      addressed in attachment I. There may be other impacts  
11      but those would be the main ones.

12                   The change in the load forecast may  
13      affect other transmission plans.

14                   Q. Thank you.

15                   In some of the cross-examination I've  
16      heard in Panel 11, there has been talk of things such  
17      as third-party access to the grid and wheeling power.  
18      Has there been any analysis of how those arrangements  
19      would affect the present transmission system?

20                   A. Our position through this hearing -  
21      which has not changed - is that we only undertake  
22      third-party access or wheeling arrangements under some  
23      very specific conditions, and that hasn't changed and  
24      there wouldn't be any change in our transmission plans  
25      based on our current position from that course.

1 Q. If you were going into it in a wider  
2 way, though, there might be changes and you haven't  
3 done any analysis of that?

4 A. It's hard to do the analysis if you  
5 don't know where the generators are going to want to  
6 locate or which loads they are going to want to wheel  
7 to.

8 Q. Now my next question has to do with  
9 Exhibit 796, attachment H. And it's the last page,  
10 schedule 4. And it's the third heading down  
11 "Delivery". And under "Delivery" there are a number of  
12 items, transmission items listed.

13 The fifth item down is the north/south  
14 transmission delay. Is that what is sometimes referred  
15 to as the Sudbury to Toronto reinforcement?

16 A. I believe it is part of the Sudbury  
17 to Toronto region plan, yes.

18 Q. Part of it. What other part...?

19 A. Well the Sudbury-Toronto regional  
20 transmission plan is dealing both with north/south  
21 flows in the sort of Sudbury-Toronto general area and  
22 also with east/west flows across the Greater Toronto  
23 Area. And I'm not familiar with the details of it, but  
24 north/south is only one part of it.

25 Q. Now the next item is headed "Other

1 High Priority Transmission Reduced". Can you give me  
2 some idea of what that would include?

3 A. No, I don't have anything that would  
4 address that. I'm sorry, I thought maybe I did have  
5 but I don't.

6 Q. Is that available?

7 THE CHAIRMAN: We have to bear in mind,  
8 Mrs. Mackesy, that this document is not a planning  
9 document. Actually this attachment H was put in for  
10 continuity reasons. It is a memorandum from the chief  
11 executive officer at Hydro setting out some work that  
12 he wanted done over the summer and attaching some  
13 figures to it.

14 The reason Mr. Snelson is having trouble  
15 is because these are not planning figures and so he  
16 wouldn't have at his fingertips what they were.

17 Is that correct?

18 [2:15 p.m.]

19 MR. SNELSON: That is correct.

20 And I think to be helpful, we did prepare  
21 attachment I to be consistent with the October  
22 decisions which are described in attachment H, and to  
23 put the decisions that were made in October regarding  
24 the changes to the transmission plan on a comparable  
25 basis to the way they had been discussed in this

1 hearing, to try and make that intelligible in the light  
2 of the discussion that that is being held here, and  
3 attachment I follows a parallel structure and updates  
4 Exhibit 442.13 which discusses the major transmission  
5 interfaces and the plans for them.

6 MRS. MACKESY: Thank you.

7 Q. Now, would you turn to pages 4 and 5  
8 of my exhibit package, please. These are copies of  
9 pages 2 and 3 from attachment D to Exhibit 796. That's  
10 the November 1992 incremental system value publication.  
11 And my questions have to do with the third paragraph on  
12 page 2.

13 First of all, could you explain what is  
14 meant by the last part of the second sentence, and I  
15 will read the second sentence:

16 "Based on experience to date and  
17 current transmission plans, inter-area  
18 transmission (transmission required to  
19 incorporate major, new generation to the  
20 bulk of electricity system) is only to be  
21 applied to options which affect loads in  
22 the Greater Toronto Area."

23 Could you explain the portion of that  
24 sentence, is only to be applied to portions which  
25 affect loads in the Greater Toronto Area means?

1 MR. SNELSON: A. I think we have we have  
2 dealt this with a little bit, but this is the carrying  
3 through into application of a first stage of trying to  
4 make our assessment of avoided costs sensitive to  
5 location. I believe that this was discussed in Panel 7  
6 on transmission by Dr. Macedo, that there were  
7 inter-regional transmission constraints on most of the  
8 transmission interfaces such that savings in  
9 inter-regional transmission would only be realized by  
10 either reductions in load in the Greater Toronto Area,  
11 or increases in generation in the Greater Toronto Area.

12 In fact, this sentence is a little bit  
13 inaccurate in that it is intended apply not only to  
14 options which affect loads in the Greater Toronto Area  
15 but also to options which affect generation in the  
16 Greater Toronto Area.

17 Q. What is the significance of the  
18 Greater Toronto Area?

19 A. Well, it is the largest load centre  
20 of the province.

21 Q. Thank you.

22 A. I believe that was discussed by Dr.  
23 Macedo in terms of the regional transmission interfaces  
24 and their constraints.

25 Q. Would this affect the calculation of



1 avoided costs for projects located outside the GTA if  
2 the electricity produced by that project eventually  
3 required more transmission being built towards the GTA?

4 A. Yes.

5 Q. I see. And how would it affect it in  
6 that case?

7 A. If you go to the back of Appendix D,  
8 to Exhibit 796, then there are a number of tables of  
9 what the actual system incremental costs would be.

10 Q. Yes?

11 A. And I'm looking at the incremental  
12 system values for project appraisal, it says project  
13 appraisal across the top.

14 Q. Yes. Is that the second last sheet  
15 from the end?

16 A. The one that I have got says  
17 incremental system values of power is the next line  
18 project appraisal. There are two such tables, one says  
19 energy and one says power.

20 Q. Yes.

21 A. And the table for power has a number  
22 of columns which are the annual credits given to an  
23 option for saving one kilowatt of load at the time of  
24 peak demand, and an option that is located inside the  
25 Greater Toronto Area would get credit for inter-area

1 transmission according to the third column, whereas an  
2 option that is outside of the Greater Toronto Area  
3 would not get that credit because we don't believe that  
4 it would likely reduce the needs for inter-area  
5 transmission.

6 Q. My last question on this, what  
7 boundaries do you consider are the boundaries for the  
8 Greater Toronto Area?

9 A. I couldn't draw a boundary on it at  
10 the moment. It certainly includes Metropolitan Toronto  
11 area and a number of the communities around it.

12 Q. Such as Durham and York, Peel,  
13 Halton?

14 A. It wouldn't necessarily follow the  
15 boundaries of political or county divisions. It was  
16 more a question of whether the load is connected to a  
17 transformer station that is supplied from which side of  
18 a transmission interface that is critical, so it has  
19 more to do with the configuration of the transmission  
20 system than it is to actual regional or political  
21 boundaries.

22 Q. If you were to take the FIGTA  
23 interface as an interface then, would something west of  
24 that get a credit?

25 A. Something west of the flow into --

1 Q. Yes. If you were bringing power from  
2 the Bruce area, would that get a credit?

3 A. A demand management option or a  
4 generation option in the Bruce area west of the FIGTA  
5 interface could not get a credit.

6 Q. Not get a credit, I see.

7 Now my last questions have to do with  
8 approvals. First, what will Ontario Hydro do if this  
9 Board were to turn down Ontario Hydro's request for the  
10 approvals that it is now requesting?

11 A. We did have, at the time of Panel 10,  
12 a no-approvals scenario, and that was on the assumption  
13 that we didn't get approvals from this process, and  
14 that we -- I am trying to remember the exact  
15 assumptions around that, but I think that would  
16 probably be the best indication that we have of the  
17 sorts of actions we might take.

18 Q. Was there something said at that time  
19 that if you didn't get approvals, that you would then  
20 move to try to acquire approval for major supply?

21 A. No, I don't believe that was shown in  
22 the scenario, because we felt that wouldn't have been  
23 appropriate.

24 Q. Okay, thank you. Now, my last  
25 question has to do with the five-year action plan. I

1 was here on Monday when there was a lot of discussion  
2 about it and I came away from that rather muddled, and  
3 I would like to place some questions based on Exhibit  
4 3, but I'm not sure whether they would allowed, they  
5 might be considered repetitive of what went on in  
6 former panels, however, I will try them.

7 This relates to page 18-2 of Exhibit 3.  
8 And it's the paragraph at the end of the first column,  
9 and I will read that:

10 The action plan includes the  
11 facilities for which an environmental  
12 assessment document is expected to be  
13 submitted before December 31st, 1996  
14 based on meeting the upper load forecast.  
15 If the actual load trend is below the  
16 upper forecast, the project commitments  
17 will be delayed to the just-in-time  
18 requirement.

19 Now, I am going to base my question on a  
20 couple of suppositions. One is that the approvals  
21 would relate to a nuclear major supply, supposing  
22 it's --

23 THE CHAIRMAN: Just a moment, hold it.  
24 There is no request for a nuclear major supply; there  
25 is only a request for a range of hydraulic.

1 MRS. MACKESY: Could I ask what I suppose  
2 is a called a hypothetical?

3 THE CHAIRMAN: It's very difficult  
4 because Ontario Hydro is not asking for a nuclear  
5 approval.

6 MRS. MACKESY: No, I realize that.

7 THE CHAIRMAN: So there are different --  
8 go ahead, I just want to make sure you understood that.

9 MRS. MACKESY: Thank you, yes. I am  
10 basing this on a supposition that someone else might  
11 persuade the Board to approval it, or that Hydro might  
12 change its mind later on.

13 Q. The other supposition is that the  
14 action plan is five years in length. And my question  
15 is, does the last sentence of that paragraph - and I  
16 will read it again, if the actual load trend is below  
17 the upper forecast, the project commitments will be  
18 delayed to the just-in-time requirement, does that last  
19 sentence mean that if an environmental assessment for  
20 the project were submitted more than five years after  
21 the date of approval, date of DSP approval, that would  
22 require new need and rationale hearings for the  
23 project?

24 MR. SNELSON: A. This is very difficult  
25 with your hypothesis. It's difficult to speculate as



1 to what might happen if we receive an approval we  
2 haven't requested, and then in five years time from  
3 receiving that approval, what we would do in that  
4 circumstance, I really don't think I could comment.

5 Q. Could you comment on what your  
6 intention was at the time this was written?

7 A. Yes.

8 Q. And what...

9 A. At the time this was written we had  
10 approvals that were defined according to chapter 19 of  
11 Exhibit 3.

12 Q. Yes.

13 A. As I understand it there was an  
14 indication in the approvals requested that the  
15 approvals would be time limited.

16 Q. What was the significance of this  
17 five years?

18 A. The five-year time period was a way  
19 in which we chose how much of the things that we had in  
20 the plan for 25 years, how much of those we would seek  
21 approval of in this process.

22 THE CHAIRMAN: I may be introducing  
23 something that I shouldn't, and correct me if I am  
24 wrong, Mr. Snelson, my understanding of the DSP was  
25 that the five-year action plan applied only to fossil

1 and nuclear new supply; it didn't apply to the  
2 hydraulic new supply which was given on a site-specific  
3 basis in the original document. The action plan was  
4 only for the fossil and nuclear and the Manitoba  
5 transmission.

6 MR. SNELSON: I do believe at that time  
7 it was also for the hydraulic.

8 THE CHAIRMAN: The charts, Plan 15, for  
9 example, I don't think show the hydraulic, it is part  
10 of the timing on that. It is just a common factor to  
11 all the plans.

12 MR. SNELSON: That is correct. But I do  
13 believe that of the hydraulic program that was shown  
14 over the 25-year period in Exhibit 3, we were not  
15 requesting approval of all of it, and we were  
16 requesting approval for those for which we had  
17 scheduled a submission of environmental assessment  
18 within the five-year period ending --

19 THE CHAIRMAN: That's right. In chapter  
20 19 which asks the approvals, with respect to Plan 15,  
21 all the approvals that you asked for in that chapter  
22 were the approvals that would come on within the  
23 five-year period, although Plan 15 itself had other  
24 supply going out to the end of the planning period.

25 MR. SNELSON: That is correct.

1                   THE CHAIRMAN: But hydraulic didn't  
2 figure in that, at least not in the wording of it  
3 anyway. Perhaps it doesn't make a great deal of  
4 difference.

5                   MS. HARVIE: Mr. Chairman, perhaps I  
6 could be of assistance.

7                   Hydraulic is not a major supply option.  
8 Chapter 17 was in relation to major supply options.  
9 The hydraulic, though, was included in the approvals  
10 being sought because it was, of course, part of the  
11 five-year plan.

12                  THE CHAIRMAN: All right.

13                  MRS. MACKESY: Q. Limiting this just to  
14 nuclear, as it was your intention in Exhibit 3, did  
15 this section mean that applications for nuclear supply,  
16 major supply, after the five-year period would require  
17 consideration of need and rationale.

18                  MR. SNELSON: A. No. It was that those,  
19 in this case nuclear facilities, for which we would  
20 have to submit an environmental assessment within five  
21 years based on the upper load forecast, that were then  
22 included as part of the approvals requested.

23                  If the approvals had been requested and  
24 if we had not withdrawn our request for the approvals,  
25 then it is possible that we would not have submitted

1 the environmental assessment within five years. Let's  
2 say the load had followed the median load growth, we  
3 may have chosen to delay the submission of the  
4 environmental assessment, and in that case we wouldn't  
5 have expected that as a matter of sort of requirement  
6 that we had to go through a new environmental  
7 assessment.

8 Now, we have recognized that the delayed  
9 application, delayed implementation of approvals has  
10 risks that there may be requests for things to be  
11 revisited, but that was not specifically associated  
12 with the five-year time period.

13 Q. All right. Can you turn to - I am  
14 not sure whether you have it, I put this on the list of  
15 materials that I might be referring to - this was an  
16 interrogatory of my own numbered 11.29.2, which I  
17 referred to in transcript Volume 166 in Panel 10.

18 A. I have the interrogatory. I don't  
19 think I have the transcript.

20 Q. If you have the interrogatory, that  
21 is fine. I will just give the page reference if  
22 someone was trying to find it in the transcript volume.  
23 It's 29254 to 29255.

24 Now going to the interrogatory itself --

25 A. If you just excuse me for a moment, I

1 think I do have the transcript.

2 Q. I will read the question and the  
3 answer and then ask if the explanation you have given  
4 me just now matches the answer to that interrogatory.  
5 The question was:

6 At an Ontario Hydro information centre  
7 in Walkerton in March of 1990 I was told  
8 to the best of my recollection that: (a)  
9 this hearing is just to get approval of  
10 the five year action plan portion of the  
11 25-year plan, and that (b), because the  
12 forecast could be different five years  
13 after 1990 than it was in 1990, need  
14 based on the new forecast would be an  
15 issue at a project-specific hearings.  
16 Could you confirm (a) and (b).

17 And the response was:

18 Please see page 32 of the Update  
19 document, Exhibit 452, for a discussion  
20 of the five-year period in relation to  
21 defining approvals requested. Approvals  
22 beyond the five-year period would require  
23 consideration of need.

24 Now, I thought I took from your answer  
25 that they might not require a consideration of need.



1 Am I right in what I'd heard?

2 A. At first sight this answer appears to  
3 be incorrect in the last sentence. I am just trying to  
4 think whether there is perhaps some other explanation  
5 of why the answer was given.

6 As we envisaged it when we produced  
7 Exhibit 3, we did not expect that an application for a  
8 project-specific environmental assessment that was  
9 relying upon the approval of need from the plan hearing  
10 and that approval having been given, that that would be  
11 limited by the five-year action plan.

12 [2:40 p.m.]

13 Q. Would you agree that people could be  
14 very confused about this and they might be going on  
15 information they received in an information centre  
16 which might turn out to be inaccurate?

17 A. I think it is quite possible that  
18 some people are confused on this issue, yes.

19 MRS. MACKESY: Thank you.

20 Those are all my questions, Mr. Chairman.

21 THE CHAIRMAN: Thank you, Mrs. Mackesy.

22 Mrs. Smith, are you next?

23 MRS. SMITH: Good afternoon, panel, and  
24 Mr. Chairman.

1 CROSS-EXAMINATION BY MRS. SMITH:

2 Q. I would like to refer first of all to  
3 Exhibit 796, section I, and it's at page 2, No. 3.  
4 Under "Flow South out of Sudbury":

5 "Upgrading of the thermal capability of  
6 the two existing 1-circuit 500 kV lines  
7 between Hanmer TS, Essa TS, and  
8 Claireville TS, as well as the series  
9 compensation at Hanmer TS and Essa TS and  
10 were expected to proceed on schedule. A  
11 five-year delay was expected in the  
12 in-service date of the third 500 kV line  
13 one-circuit line from Hanmer TS to the  
14 Greater Toronto Area. This work was part  
15 of the Sudbury-Toronto Area Transmission  
16 Reinforcement (STR) project and approvals  
17 for this work are assumed to proceed on  
18 the original schedule."

19 I wonder if you could tell me why in the  
20 last sentence it uses the past tense?

21 MR. SNELSON: A. It is probably more  
22 accurate to use the present tense.

23 Q. So in other words, this document  
24 isn't accurate in that it should say this work is part  
25 of the Sudbury-Toronto transmission project?

1 A. Yes.

2 Q. Thank you.

3 I'm at these DSP hearings because I live  
4 in a community that is a target area for massive  
5 Ontario Hydro transformer station. This is part of the  
6 Sudbury to Toronto STR reinforcement project.

7 The need for this project was northern  
8 hydraulic development. I was told by several members  
9 of Ontario Hydro staff that the need and rationale for  
10 the STR project was being determined at these DSP  
11 hearings, because the approval for this northern  
12 hydraulic generation is being determined at these DSP  
13 hearings. And, further, Ontario Hydro provided me with  
14 two newsletters, both of which I would like to submit  
15 as exhibits.

16 THE CHAIRMAN: You understand, Mrs.  
17 Smith, that you are here to question the panel, not at  
18 this time to put forward your submissions?

19 MR. SMITH: I just want to explain to  
20 them what was leading up to my question but I would  
21 like to ask a question.

22 THE CHAIRMAN: All right if you are doing  
23 it for that purpose, but you must understand that what  
24 you are here to do is to ask them questions. You can  
25 lay a foundation for the question by stating your

1 position very briefly, but this is not the time for you  
2 to make your argument.

3 MRS. SMITH: Okay. Thank you, sir.

4 THE REGISTRAR: Do you wish this to be  
5 entered as an exhibit.

6 MRS. SMITH: Yes, could you please.

7 THE REGISTRAR: It will be 1053, Mr.  
8 Chairman.

9 THE CHAIRMAN: Thank you.

10 ---EXHIBIT NO. 1053: Project Newsletter No. 2, dated  
11 March 1992.

12 MRS. SMITH: Q. Both of these documents  
13 state that part of the need for the STR project is the  
14 new hydraulic development in the North.

15 Newsletter No. 1, at page 2, under "Why  
16 are the New Facilities Needed?" Under 1, "Power from  
17 the North", I would like to read part of the first  
18 paragraph. It says:

19 "A significant portion of the  
20 additional power needed in Ontario in the  
21 future is expected to come from the  
22 proposed new hydro-electric plants in  
23 northern Ontario...."

24 I would like to now refer to page 3 at  
25 the top of the left-hand side:

1 "The existing transmission lines  
2 connecting northern Ontario to the  
3 province's industrial and population  
4 centres will be unable to reliably  
5 transmit this additional power."  
6 And falling down now to the next

7 paragraph:

8 "However, even with this improvement,  
9 additional transmission facilities will  
10 be required. The proposed new lines  
11 between the Sudbury and Toronto areas  
12 would solve this problem....."

13 I will refer now to the second newsletter  
14 which is attached. And I will go to page 2 on the  
15 bottom left-hand side under "Meeting Ontario's  
16 Electricity Needs".

17 The first bullet.

18 THE CHAIRMAN: I think we have only one.

19 MS. PATTERSON: We have No. 2.

20 MRS. SMITH: You don't have No. 1?

21 THE CHAIRMAN: Hold it just a minute. We  
22 have as Exhibit 1053 a project newsletter dated March  
23 1992, labelled Newsletter No. 2.

24 THE CHAIRMAN: There is another  
25 newsletter, two newsletters.



1 THE REGISTRAR: Yes, sir, Mr. Chairman,  
2 but the first one is this.

3 THE CHAIRMAN: The one that has been  
4 given 1053 is labelled newsletter No. 2, March 1992.

5 THE REGISTRAR: We will leave it at that  
6 one then?

7 THE CHAIRMAN: Yes.

8 THE REGISTRAR: And this will be 1054.

9 THE CHAIRMAN: Just hold it a minute,  
10 Mrs. Smith.

11 ---EXHIBIT NO. 1054: Project Newsletter No. 1, dated  
12 June 1991.

13 THE CHAIRMAN: Now have you a question  
14 that you want to ask the panel about the contents of  
15 this newsletter? And, if so, perhaps you could do  
16 that. Of these newsletters.

17 MRS. SMITH: Could I just read the last  
18 portion here on the second newsletter under "Meeting  
19 Ontario's Electricity Needs" at the first bullet, on  
20 the lower left-hand side, it says:

21 "To incorporate 1,000 megawatt power  
22 purchase from Manitoba Hydro, the  
23 developments of private non-utility  
24 generators and renewable hydroelectric  
25 generation resources, many of which are

1 located in northern Ontario...."

2 Q. Based on these documents, I was told  
3 that the need and rationale for the STR project is  
4 inextricably tied with new northern electric plants and  
5 as such the costs and environmental impacts of the STR  
6 project should be addressed and factored at these DSP  
7 hearings. Is that correct, Mr. Snelson?

8 MR. SNELSON: A. No. I don't know who  
9 told you that.

10 Q. I was told by several members from  
11 Ontario Hydro staff.

12 THE CHAIRMAN: Well, Mr. Snelson says --  
13 if that's what they told you, that wasn't right.

14 MRS. SMITH: Q. So that's not correct?

15 MR. SNELSON: A. There are some aspects  
16 of this consideration that affect the Sudbury-Toronto  
17 regional transmission. And so it isn't correct to say  
18 that they are totally separate, but neither are they  
19 one and the same process that is inextricably linked.

20 Q. If there weren't this northern  
21 hydraulic development would there be -- okay. Is any  
22 portion of the STR project dependent on these northern  
23 hydraulic developments that you are seeking approval  
24 for here?

25 A. Changes to our generation plan and

1 any that affects regional/inter-regional transmission  
2 flows can affect the plans for transmission for those  
3 inter-regional flows, and the Sudbury-Toronto regional  
4 plan is one of these inter-regional transmission  
5 interfaces that can be affected by changes in the plans  
6 for Northern Ontario hydraulic or for Northern Ontario  
7 non-utility generation or changes in load. There are a  
8 variety of factors.

9 Q. Thank you, sir.

10 THE CHAIRMAN: Just so my understanding  
11 is correct. In this hearing, as it now is constituted,  
12 there will be no consideration of any specific  
13 transmission line. What is being requested here now is  
14 an approval of a range of hydraulic with related radial  
15 transmission that would be necessary in order to be  
16 able to deliver any generation from any hydraulic that  
17 eventually was built. All the hydraulic will be  
18 subject to site-specific considerations and so will any  
19 transmission that is needed for that purpose. We are  
20 here to consider really the need for that range of  
21 generation.

22 Is that your understanding, Mr. Snelson,  
23 what I have just said?

24 MR. SNELSON: Yes, I believe it is.

25 MRS. SMITH: Okay. Thank you.

1 Q. I would like to refer you to Volume

2 177, page 30977, lines 11 to 14.

3 MR. SNELSON: A. Excuse me. Could you  
4 tell me what the page number was again.

5 Q. 30977. That's Volume 177.

6 A. I have the page, yes.

7 Q. Okay. I believe, Mr. Snelson, you  
8 are speaking here. I would like to refer you to lines  
9 11 to 14.

10 Are we continuing to seek approval for  
11 a range of hydraulic -- we are still  
12 continuing to seek approval for a range  
13 of hydraulic capacity and including the  
14 need for radial transmission associated  
15 with that capacity.

16 In relation to that, there is one thing  
17 that I'm really having trouble with and that is the  
18 difference between radial and inter-area transmission  
19 approval.

20 It says at page Appendix A13 of Exhibit  
21 3, under segment 20, under Radial Transmission:

22 One or more transmission circuits  
23 connecting a generating station into the  
24 bulk electricity system together with  
25 inter-area transmission forms the

1 transmission necessary to incorporate a  
2 new generation station into the bulk  
3 electricity system.

4 Is that the current definition of radial  
5 transmission, Mr. Snelson?

6 A. Yes.

7 Q. As pointed out in Exhibit 3, A13,  
8 both radial and inter-area transmission are required to  
9 incorporate a new generation station into the bulk  
10 electricity system. And as we know that both would  
11 have the cost of environmental impact associated with  
12 it that must be considered to give this panel all of  
13 the information necessary if they are going to be able  
14 to answer questions 22 and 23 of the scoping document,  
15 scoping ruling, October 31st. I did prepare copies of  
16 that because I couldn't find it in the exhibits. I  
17 don't know whether I have to submit that or not, if you  
18 would like to have a copy of it.

19 These questions I believe the panel felt  
20 would be appropriate for this DSP hearing. Can you  
21 tell me if you are seeking that approval here for the  
22 need and rationale for the inter-area transmission that  
23 is an integral part of the transmission required to  
24 incorporate a new generation station?

25 MR. SNELSON: A. We are only seeking



1 approval for the radial transmission.

2 Q. But in the radial transmission there  
3 is also inter-area transmission.

4 A. That's not how I read the definition.

5 Q. Could you please tell me, sir, how  
6 you do read the definition?

7 A. It says one or more transmission --  
8 at radial transmission:

9 One or more transmission circuits  
10 connecting a generating station into the  
11 bulk electricity system.

12 And it says:

13 together with inter-area transmission

14 So I read that as radial transmission  
15 together with inter-area transmission forms the  
16 transmission necessary to incorporate a new generating  
17 station into the bulk electricity system.

18 So for full incorporation, you definitely  
19 need the radial transmission. And there can be  
20 implications for inter-area transmission that there may  
21 be additional inter-area transmission that is affected  
22 by the generating station and there may be some changes  
23 required for full incorporation.

24 THE CHAIRMAN: If you look back a couple  
25 of pages, the definition of inter-area transmission,

1       which excludes radial transmission.

2               MRS. SMITH: Q. Would you not include in  
3       that the inter-area transmission that is necessary to  
4       get this new generation to the point that it's going to  
5       be needed at?

6               MR. SNELSON: A. Well, the difficulty is  
7       that inter-area transmission requirements are affected  
8       by many things. Incorporation of generation is only  
9       one of the things that affects the need for inter-area  
10      transmission.

11              Q. I understand that because I have  
12      heard you refer to that before.

13              But do you feel that it's appropriate to  
14      just be able to label something inter-area and attach a  
15      another purpose to the use for that transmission to be  
16      able to exclude it from taking into consideration all  
17      the costs and environmental impact of that transmission  
18      when really it is a part of the radial transmission  
19      that is needed to be able to get that power to the area  
20      where you need to use it?

21              A. Radial transmission is different to  
22      inter-area transmission, and any transmission that is  
23      between two large areas of the system that has a  
24      variety of generation and loads in each part of that  
25      system, that is by its very nature inter-area

1 transmission. It is not a question of deciding what  
2 label to put on it. If it is between two areas of the  
3 system, then it is inter-area transmission.

4 Q. But is it true that we could say that  
5 you can't have radial transmission and have that cover  
6 all the transmission that would be necessary to  
7 incorporate that new generation into the system?

8 A. Well, we have provided definitions  
9 here and it is a delicate matter as to the distinction  
10 because of the interactions to which you are alluding.

11 But as a practical matter, you can't  
12 expand a process to include everything. The radial  
13 transmission is driven by the generation and there is a  
14 very clear relationship between the radial transmission  
15 and the generation.

16 When you come to the inter-area  
17 considerations, then you have to consider the balance  
18 of loads and generation in each area, and it will be  
19 affected by possibly more than one type of generation  
20 project; it will be affected by the distribution of  
21 loads; it will be affected by how the system is  
22 operated; it may also be affected by technical  
23 considerations regarding stability and short-circuits  
24 and so on.

25 Q. I refer you here to the preceding

1 page where it talks about inter-area transmission.

2 That would be Appendix All of Exhibit 3. And it says  
3 that inter-area transmission --

4 One or more transmission circuits  
5 interconnecting areas of the bulk  
6 electricity system transmits electricity  
7 from points of generation to points of  
8 use, and this excludes radial  
9 transmission.

10 I still feel that under your definition,  
11 you are including inter-area transmission, and I feel  
12 that because inter-area transmission states that it is  
13 moving electricity from points of generation to points  
14 of use, that these costs and environmental impacts are  
15 a major portion of any transmission that is needed for  
16 new generation.

17 MR. B. CAMPBELL: Well, Mr. Chairman, I  
18 think Mr. Snelson has said as much as he can on this.  
19 He has indicated that he believes that he is using the  
20 definitions that are in the book and they do not  
21 correspond to the description that you have just  
22 received. I think there is --

23 THE CHAIRMAN: She was also reading that  
24 from the book, too.

25 MR. B. CAMPBELL: Yes.

1                   And I think Mr. Snelson has answered that  
2                   question and in earlier panels there has been testimony  
3                   about how transmission costs generally and effects are  
4                   taken into account overall in the planning that has  
5                   been done.

6                   The cross-examiner may not accept the  
7                   definitions. She may take a different view of it. But  
8                   that in the end is surely a matter for argument and I  
9                   think Mr. Snelson has explained Hydro's position quite  
10                  clearly.

11                  MRS. SMITH: Another part of that issue  
12                  that I am very concerned with is the fact that the  
13                  approval for radial transmission is being sought here.  
14                  And I feel that because inter-area is a part of this  
15                  radial transmission, I would like to know, sir, if you  
16                  receive permission here or approval here for radial  
17                  transmission to incorporate these new hydraulic  
18                  development in the North, are these permissions going  
19                  to be for any inter-area transmission that you feel you  
20                  would like to include in this radial transmission under  
21                  your interpretation of the words "radial transmission"?

22                  THE CHAIRMAN: I think he has answered  
23                  that question. I think he has answered it and said  
24                  that that is not -- I think I tried to explain it a  
25                  moment ago. We don't know specifically where the



1 hydraulic are going to be. And when they are brought  
2 on, they will be subject to site-specific hearings.  
3 And if there is to be any change in inter-area  
4 transmission, those are also subject to site-specific  
5 hearings.

6 [3:00 p.m.]

7 MRS. SMITH: Q. I think just the very  
8 fact that it talks about Northern Ontario and it talks  
9 about this project bringing power south from Northern  
10 Ontario, I don't have to be too concerned exactly which  
11 site it's going to be because this power is all going  
12 to come into Sudbury and this other is going to go  
13 south from here.

14 THE CHAIRMAN: And these issues will be  
15 considered. I think that's what you have been told.

16 MR. SMITH: Thank you.

17 Q. I was further told by Ontario Hydro  
18 staff that the only other environmental assessment  
19 hearings for the STR project would deal only with route  
20 and site. Does Ontario Hydro plan to submit an  
21 environmental assessment document for the STR project  
22 that will prove the need and rationale for the STR  
23 project to be something other than a foregone  
24 conclusion based on the Northern hydraulic approvals  
25 these DSP hearings may grant?

1 MR. B. CAMPBELL: Mr. Chairman, I think I  
2 can be quite clear about the fact that if the STR  
3 project proceeds in its present form, and you have  
4 heard that transmission matters are currently under  
5 review, if it proceeds in the form presently  
6 constituted, it will be a complete environmental  
7 assessment addressing all aspects under the Act, with  
8 no reliance on excluding any considerations because  
9 of -- and I think we have been perfectly clear about  
10 that, with respect to the Toronto/Sudbury project, the  
11 approvals granted here cannot themselves eliminate any  
12 considerations from the STR project.

13 THE CHAIRMAN: That would include need.

14 MR. B. CAMPBELL: That would include  
15 need.

16 I am saying that it will be, if it  
17 proceeds in its present form, it will be a complete  
18 environmental assessment.

19 I try as much as I can to resist the word  
20 "need" because the word in the Act is rationale. There  
21 will be a complete rationale for the project presented.

22 MRS. SMITH: Q. Will part of this  
23 rationale be the fact that you have this new northern  
24 hydraulic generation, Mr. Snelson?

25 THE CHAIRMAN: That will depend on what

1 the presentation is. It's not part of this hearing.

2 MRS. SMITH: Okay.

3 Q. Is it the intention of Ontario Hydro  
4 that the notice of the DSP hearings be sufficient to  
5 identify to the local residents that a massive  
6 transformer facility is planned in their area, Mr.  
7 Snelson?

8 MR. SNELSON: A. Was the notice of the  
9 need for this hearing?

10 Q. Yes, sir.

11 A. This hearing is not, as far as I am  
12 aware, this hearing is not considering the need for the  
13 transformer stations anywhere and that was not covered  
14 by the notice to my knowledge.

15 Q. Thank you, sir.

16 MR. B. CAMPBELL: I take it, Mrs. Smith  
17 that in that question you were referring to the  
18 transformer stations associated with STR project?

19 MRS. SMITH: Or that are also mentioned  
20 in other ways. I am talking about site A, it's  
21 mentioned several times in other ways.

22 MR. B. CAMPBELL: Site A, as I understand  
23 it, is part of this STR project definition where they  
24 are looking for transformer station sites; is that  
25 correct.

1 MRS. SMITH: I think that's where they  
2 actually specify, that's actually probably where they  
3 are going to seek the permission, let me put it that  
4 way, in my understanding, to build these sites, but  
5 they are mentioned in other areas. They are mentioned  
6 in conjunction with Bruce, with London, lines out of  
7 there, with lines from a transformer station in the  
8 east.

9 MR. B. CAMPBELL: Could I just have a  
10 moment?

11 ---Off the record discussion.

12 THE CHAIRMAN: Mr. Campbell?

13 MR. B. CAMPBELL: Mr. Chairman, I could  
14 leave this to come back to in re-direct, but I think it  
15 would be fair to Mrs. Smith if I dealt with it here. I  
16 am just concerned that the answer that Mr. Snelson gave  
17 may be, in one minor respect, incomplete in that I  
18 would ask him whether or not at the generating station,  
19 at the generating end of the transmission line, there  
20 wouldn't be some transformation. I don't think power  
21 is generated at transmission voltages and I think at  
22 the generators there are transformers and presumably  
23 the other end would connect with some appropriate point  
24 on the bulk power system. It's from that point through  
25 to the generation that the radial transmission runs.

1 I am just concerned that the impression  
2 may have been left that there is not even any  
3 tranformation at the station end, it's a little unusual  
4 to do it this way, but maybe it's easiest if that  
5 answer needs to be corrected, to correct it now.

6 MR. SNELSON: Mr. Campbell is correct,  
7 there may be transmission or there will be transmission  
8 facilities associated with the incorporation and radial  
9 transmission -- that's transformation, and that is a  
10 part of the approvals requested, but only for the  
11 facilities at the generation station, and there may be  
12 some facilities associated with the radial transmission  
13 to the nearest point on the bulk system, not  
14 transmission -- sorry, transformation facilities that  
15 are remote from the site of the generation or its  
16 incorporation.

17 MRS. SMITH: Thank you. Just a second,  
18 please.

19 Q. What about at the site where it  
20 connects with the bulk electrical system, if there is  
21 no connection there, is that connection being  
22 considered? Are you looking for the need and rationale  
23 for that connection?

24 MR. SNELSON: A. The radial transmission  
25 for the which the need and rationale is being sought



1 here goes up to the nearest connection to the major  
2 bulk power transmission, and there can be some  
3 facilities required at that particular location to make  
4 that connection, and that those would be part of the  
5 need and rationale, sought here, yes.

6 Q. You would be considering those in  
7 this hearing?

8 A. The need and rationale for them.

9 You will recall that the approvals  
10 requested are not site specific and it's only the need  
11 and rationale rather than the location or any  
12 site-specific aspects that are being looked at here.

13 Q. Thank you. Is there a specific  
14 voltage for radial transmission, sir?

15 A. No.

16 Q. Sir, in a case where a new  
17 transformer station might be required to be able to  
18 incorporate the voltage of the radial transmission into  
19 the bulk electrical system, would the need and  
20 rationale be being sought for that transformer station  
21 in this hearing?

22 A. In most cases the radial transmission  
23 tends to come into an existing transformer station or  
24 existing switching station, but of course these are  
25 site-specific aspects. It is possible that there could

1 be a need for an additional transformer station at the  
2 location where you are connecting to the bulk power  
3 system, but in most cases the incorporation takes you  
4 into an existing transformer station.

5 Q. Are there any cases in your present  
6 request that do require a new transformer station?

7 A. The present request is for a range of  
8 hydraulic capacity and hydraulic energy and is not  
9 site-specific, so that question can't be answered.

10 Q. Thank you, sir. Could I just go back  
11 over a question that I asked you because I wasn't too  
12 sure of what the answer was.

13 When I said is it the intention of  
14 Ontario Hydro that the notice of DSP hearing be  
15 sufficient to identify to the local residents that a  
16 massive transformer facility is planned in their area.  
17 Could I please have you answer. I think Mr. Campbell  
18 stood up and then we got on to something else and I  
19 don't really think this got answered.

20 MR. B. CAMPBELL: It's only going to be  
21 me that answers it.

22 I think the adequacy of notice is a  
23 question that it is my responsibility to address and I  
24 will do so.

25 We believe that the notice is adequate

1 for the radial transmission approvals that we are  
2 seeking in this proceeding. It is not connected with  
3 any approvals which may or may not be sought with  
4 respect to the STR project.

5 MRS. SMITH: Q. I was wondering more  
6 about the massive transformer facility that's planned,  
7 I wonder if this notice was sufficient to identify to  
8 the local residents that this was coming.

9 MR. B. CAMPBELL: I am not sure what  
10 transformation facilities you are referring to.

11 MRS. SMITH: I am referring to site A  
12 that's mentioned several times.

13 MR. B. CAMPBELL: Site A, as I understand  
14 it, is in the northern side of the GTA area, and it  
15 being part of the STR project, I think I have just said  
16 that the notice for this hearing does not relate to  
17 whatever notice may be given for that hearing.

18 MRS. SMITH: Okay.

19 MR. B. CAMPBELL: I think that answers  
20 your question.

21 MRS. SMITH: Initially, sir, when you did  
22 make the notice of these hearings, you were planning  
23 this site A, it's referred to several other ways than  
24 the STR project. Did you feel that that notice that  
25 you gave at that time was sufficient to identify to the

1 local residents that this would be coming?

2 MR. B. CAMPBELL: I think it's the  
3 same --

4 MRS. SMITH: Under your transmission  
5 document you refer to it, you talk about bringing lines  
6 in from Bruce and lines in from Longwood station and so  
7 on to this site A.

8 MR. B. CAMPBELL: I am not sure what  
9 transmission documents you are referring to. But  
10 dealing specifically with the question of notice, it  
11 was not Ontario Hydro's intention in applying for  
12 directions from this Board for notice - I can't speak  
13 for the Board - but it was not Ontario Hydro's  
14 intention in applying for directions from this Board  
15 for notice to obtain a form of notice that would be  
16 sufficient for approvals that may be sought with  
17 respect to STR.

18 MRS. SMITH: Okay, thank you.

19 Q. We have a DSP 25-year plan, it's  
20 Exhibit 3, and we have a January 1992 Update to the  
21 25-year plan, and then we have this January 1993  
22 Exhibit 796 Update to the 25-year plan. Can you tell  
23 me when the next update to the 25-year plan will take  
24 place? I guess, Mr. Burke, would this be a question  
25 for you?

1 MR. BURKE: A. No.

2 Q. Mr. Snelson?

3 MR. SNELSON: A. I will answer the  
4 question, and the answer is no, I can't tell you when  
5 there will be another update.

6 Q. Okay. Can you tell me, will there  
7 be another update for this plan when the projects that  
8 are presently under review are finished being under  
9 review, like, when you find out the status of these  
10 projects are you going to have another update?

11 A. Which projects under review are you  
12 referring to?

13 Q. Any of the projects that you  
14 mentioned in this hearing, I will specifically  
15 attachment I, the transmission projects. I will bring  
16 that specifically.

17 A. The transmission projects? I doubt  
18 that the transmission projects alone would be  
19 sufficient to justify the need for an update to the  
20 Demand/Supply Plan document.

21 Q. Thank you, sir. If you are granted  
22 approval at these DSP hearings for 1,400 to 1,800  
23 megawatts of hydraulic capacity, I believe that's the  
24 amount that you are requesting, is this going to be  
25 enough to supply the future needs of the province for



1 the next 25 years?

2 THE CHAIRMAN: No, and they are not  
3 suggesting that. They are saying this is all the  
4 approvals they need at this time. They recognize that  
5 there will be more supply needed in the next 25 years,  
6 but they don't think it necessary or appropriate to ask  
7 for approvals at this time. That's their position.

8 MRS. SMITH: Okay.

9 Q. Could you tell me how you would ask  
10 for any approvals for any more that you did need in the  
11 future?

12 MR. SNELSON: A. We have to obtain  
13 appropriate approvals for whatever new projects we  
14 proceed with. Approvals under the Environmental  
15 Assessment Act are required for a lot of the things  
16 that we do, and we bring forward applications under the  
17 Environmental Assessment Act for environmental  
18 assessment and follow those procedures.

19 Q. So would they be the subject of  
20 different hearings, futures hearings?

21 THE CHAIRMAN: Well, that would depend.  
22 There is a process in the Environmental Assessment Act  
23 which may lead to a hearing and which may not. It's  
24 subject to the Environmental Assessment Act.

25 MRS. SMITH: Thank you.

1 I don't have anymore questions. Thank  
2 you very much.

3 THE CHAIRMAN: Thank you, Mrs. Smith.

4 Mrs. DeQuehen, you are you next. I think  
5 we will take a 15-minute break and then we will start  
6 with you.

7 THE REGISTRAR: Please come to order.  
8 This hearing will recess for 15 minutes.

9 ---Recess at 3:15 p.m.

10 ---On resuming at 3:35 p.m.

11 THE REGISTRAR: Please come to order.  
12 This hearing is again in session. Please be seated.

13 THE CHAIRMAN: Mrs. DeQuehen.

14 CROSS-EXAMINATION BY MRS. DeQUEHEN:

15 Q. With reference to document 796, the  
16 point which is of most interest to everyone is what  
17 approvals sought remain. And one item of course is  
18 approval of a range of hydraulic. That's correct.

19 There has been difficulty with this term.  
20 The term hydraulic -- the term range can be used as a  
21 concept or in the abstract, but if used in conjunction  
22 with another word it denotes variational spread; it  
23 doesn't denote an amount at all. I mean a range of  
24 options means various types of options, range of  
25 anything, vegetables, anything, means various types of

1       vegetables. It doesn't denote amount in any way, does  
2       it?

3                   THE CHAIRMAN: I would have thought that  
4       it meant that there is approval of a range of hydraulic  
5       capacity from 1,400 to 1,800. Is that the figure,  
6       1,400 to 1,800 megawatts?

7                   MR. SNELSON: Yes.

8                   THE CHAIRMAN: And that within that range  
9       of hydraulic, Hydro would be free to seek or continue  
10      with site-specific approvals, without having at those  
11      site specific hearings the need to, the necessity to  
12      establish rationale requirement.

13                   MRS. DeQUEHEN: Q. Well the term --

14                   THE CHAIRMAN: Are you suggesting that  
15      hydraulic could read fossil. Is that what you're  
16      suggesting.

17                   MRS. DeQUEHEN: No, that's not what I'm  
18      suggesting. I'm suggesting that a range of hydraulic  
19      was taken by me and by a lot of people to mean a range  
20      of different types of hydraulic rather--

21                   THE CHAIRMAN: Sorry, what do you mean  
22      by --

23                   MRS. DeQUEHEN: --than a certain amount  
24      of hydraulic.

25                   THE CHAIRMAN: What do you mean by

1 different types of hydraulic?

2 MRS. DeQUEHEN: Well, it could be a range  
3 of hydraulic sites, sites within a range. Or it could  
4 be taken to be anything. It's been used without -- if  
5 it had stated a range of hydraulic capacity, it would  
6 have been clearer.

7 MR. SNELSON: The statement of the  
8 meaning of hydroelectric approval, I think the clearest  
9 statement as to its form is in Exhibit 360, which was  
10 prepared at about the time that the Board gave its  
11 ruling on the site-specific nature or lack of  
12 site-specific nature to the hydroelectric approvals  
13 that would be considered.

14 MRS. DeQUEHEN: Q. I'm sure you will say  
15 that if people have been following Panel 7 and, you  
16 know, read every single thing that has ever been  
17 written, it would have been possible to know what was  
18 meant. But I'm just saying for a member of the general  
19 public or government department, they would have  
20 trouble with that term and I think that it should be  
21 qualified.

22 I just think it should be something like  
23 an output range of hydraulic supply or something like  
24 that and then it would be clear that you are referring  
25 to a range of output.

1 MR. B. CAMPBELL: Well, Mr. Chairman,  
2 with respect, I think that is true. Exhibit 360, as  
3 Mr. Snelson indicated, outlined that -- we put before  
4 the Board to be sure that we had an appropriate  
5 statement of the results on the approvals of the  
6 Board's ruling, as you will recall.

7 And then in Exhibit 452, as was the case  
8 during Panel 6 as well, but certainly in Exhibit 462 as  
9 well, there was a very specific number of megawatts and  
10 amount of energy associated with the approval  
11 requested. And I think it is clearly stated there and  
12 in Exhibit 360.

13 MRS. DeQUEHEN: Yes, well I will just  
14 drop this.

15 Q. But I knew that you were requesting a  
16 certain amount of hydraulic generation, just as you are  
17 requesting a certain amount of all other options, short  
18 and long term. But this expression, a range of  
19 nuclear, a range of fossil, was not used for other  
20 options; it was only used for hydraulic and I think  
21 that's how confusion arose.

22 Is the plan in 796 an illustrative case  
23 or are you seeking approval for this particular plan?

24 MR. SNELSON: A. The specific approvals  
25 that we are seeking are for the range of hydroelectric



1 capacity and energy that we have discussed.

2 In dealing with that then, consideration  
3 is given to a number of other matters and that's been  
4 discussed as to how the Board has to look at all the  
5 aspects of the plan. But the specific approvals  
6 requested are with respect only to hydraulic at the  
7 moment.

8 Q. So the rest of the plan is just  
9 illustrative?

10 A. In many parts of the plan are the  
11 plans of the corporation that are being instituted and  
12 are being acted upon and do not require approval, as we  
13 see it, of this Board.

14 Q. But you are seeking approval for the  
15 whole plan which breaks down into components?

16 THE CHAIRMAN: I don't think that's quite  
17 what Mr. Snelson said. What is being requested  
18 specifically and technically is the approval of the  
19 hydraulic range. What has to be considered in light of  
20 that is all the evidence that has been presented at  
21 this hearing.

22 MRS. DeQUEHEN: Q. I'm sorry, I wasn't  
23 clear about this. You don't actually have a case plan  
24 up for consideration for approval? I mean, it's not a  
25 plan you are trying to get approval of, only of these

1 options?

2 THE CHAIRMAN: They have a plan which is  
3 their current plan but that's not what is the subject  
4 matter of the approval. The approval is, at the  
5 moment, a range of hydraulic generation.

6 MRS. DeQUEHEN: Q. So if you are not  
7 seeking or expecting an approval of a plan from the  
8 decision of this hearing, what -- I understand that you  
9 have hydraulic, range of hydraulic approval, but other  
10 than that, what are you actually expecting if it is  
11 not an approval? Just an acknowledgment of a plan or  
12 what? What sort of decision, how would you refer to  
13 that decision? How would you define it?

14 MR. SNELSON: A. I don't think this has  
15 changed in principle since we were on Panel 10. All  
16 that has happened since Panel 10 is that instead of  
17 seeking approval for Manitoba Purchase incorporation,  
18 the rationale for the Manitoba Purchase incorporation,  
19 and the rationale for the range of hydroelectric  
20 approvals, then the approvals requested has now been  
21 reduced to just the hydroelectric approvals.

22 But at that time and now the situation  
23 was that in considering those approvals, that will have  
24 to be done in the context of what future options and  
25 plans are likely to be implemented in the future. And

1 in coming to the decision on those approvals, for  
2 instance, this Board may very well want to comment. I  
3 can't say they will but they may want to comment on the  
4 relative merits of the demand management program: Is  
5 it too big? Is it too small? The non-utility  
6 generation program in fact is affecting that.

7 So in looking at the specific approvals,  
8 then that has to be done within the context of the  
9 electricity plans for the future.

10 Q. So you are not expecting any decisive  
11 conclusions on the plan? It is an environmental  
12 assessment process but you are not expecting a decision  
13 which from the environmental hearing? It is not a  
14 decision you are expecting, just comments?

15 A. I believe we are expecting a decision  
16 on our request for approvals.

17 Q. Yes, I know that. I was just talking  
18 about the plan in general.

19 A. As I understand it, the decision we  
20 are expecting is with respect to the approvals that we  
21 are requesting.

22 Q. Thank you. It seems to me that so  
23 much emphasis is being put on timing, for example,  
24 requirement of supply, requirement of approval. And we  
25 could call this the dynamics of the process. And all

1 the deferrals, et cetera.

2 I think what we should be concentrating  
3 upon is the underlying principal facts and philosophy  
4 behind the process. The underlying philosophy of  
5 Ontario Hydro is outlined in 452. I don't know whether  
6 you will agree but there is essentially no change in  
7 internal philosophy with respect to the Update, 796.  
8 The actual philosophy, underlying philosophy hasn't  
9 changed.

10 A. I think I said in my direct evidence  
11 that the underlying philosophy remains essentially the  
12 same.

13 Q. It seems that in short-term planning,  
14 it isn't really so much a plan but a matter of  
15 adjustment or shifts of time frame and a balancing of  
16 demand/supply.

17 And this would happen and be going on,  
18 these adjustments, in response to whatever is happening  
19 and outside influences as is very precisely stated in  
20 21 of 796 whether or not there was a process going on  
21 here. But there has been so much interest and  
22 concentration upon this as though it were of greater  
23 importance than is really so. What we should be  
24 concentrating on is long-term planning principles. I  
25 feel that we are all being distracted by the dynamics

1 of the situation as it were. And I wonder whether you  
2 agree with me?

3 A. I'm not quite sure I followed all of  
4 that, but I think it relates to what I said in direct,  
5 which is that the changes that have taken place with  
6 respect to the short-term plans which are responding to  
7 short-term influences are in fact larger than the  
8 changes that have been made with respect to long-term  
9 plans.

10 Q. Would you agree that a planning and  
11 assessment process should put greater emphasis on  
12 underlying -- sorry, I said that. And that matters  
13 such as competitive quantities of supply and pressures  
14 of bargaining should not be encouraged in this process?

15 A. Pressures of what should not be  
16 considered?

17 Q. That there should not be matters  
18 which refer to competitive quantities of supply and  
19 bargaining processes should not be encouraged in this  
20 hearing process.

21 A. I'm not sure that I quite understand  
22 what sort of bargaining processes it is that you are  
23 referring to.

24 Q. Well, I don't know what your attitude  
25 is, but I don't think this process should be used as a



1 marketplace for professional lobbyists like Atomic  
2 Energy of Canada who obviously have little  
3 environmental sensitivity and whose over purpose is to  
4 tote their wares and force their nuclear plants upon  
5 the province.

6 Do you believe that this type of vested  
7 interest, pressurization and negotiation is out of  
8 place in this process?

9 THE CHAIRMAN: Mrs. DeQuehen, persons are  
10 entitled at this hearing as you were to seek status.  
11 And if they seek status, then they participate in the  
12 hearing. And what their interests are is a matter we  
13 all have to give weight to when we come to make our  
14 decision. So I don't think these witnesses can really  
15 help you in that. You may have your view about what  
16 the hearing ought to be, but we have a process that we  
17 have to follow and people are granted status and they  
18 participate.

19 MRS. DeQUEHEN: In fact when Ontario  
20 Hydro speaks of requesting approvals from this Board  
21 with respect to an option and an environmental group  
22 speaks of a full general environmental assessment of an  
23 option, they mean the same thing in fact.

24 THE CHAIRMAN: Well, not always.  
25 Sometimes they interconnect in some areas and sometimes

1 they don't.

2 MRS. DeQUEHEN: Q. Mr. Snelson, aren't  
3 they merely coming at the same thing from different  
4 ends? Ontario Hydro is seeking approval for an option  
5 hopefully as arising from the decision of a  
6 comprehensive environmental assessment hearing. Isn't  
7 that the approval that you are seeking here?

8 MR. SNELSON: A. We are seeking the  
9 approvals as defined under the Environmental Assessment  
10 Act following the procedures of that Act.

11 Q. Which to put it plainly is  
12 environmental acceptability or environmental assessment  
13 clearance perhaps?

14 A. It does require consideration of the  
15 environmental assessment, and that covers a broad range  
16 of matters that have been discussed in front of this  
17 hearing.

18 Q. An environmental group would think in  
19 terms of submitting an option for a comprehensive  
20 environmental assessment hearing. A decision from the  
21 hearing would be to grant the approval or hopefully not  
22 to grant it, but it is the same thing in fact because I  
23 have noticed that groups always talk in terms of an  
24 environmental assessment hearing and you always talk in  
25 terms of -- Ontario Hydro speaks in terms of gaining

1 approval but actually they are talking about the same  
2 thing, generally?

3 [3:50 p.m.]

4 A. This is an environmental assessment  
5 hearing. This is the process that we through which we  
6 are trying to obtain the approval of rationale and need  
7 for a range of hydroelectric capacity.

8 Q. Sorry, you have already answered a  
9 lot of my questions, I can skip them out.

10 In Panel 10 you felt that even if the  
11 plan were approved, you may be required to undergo  
12 subsequent full general environmental assessment  
13 hearings for the nuclear option. With regard to the  
14 current plan in 796, do you feel this to be the case?  
15 And I have got four categories: Maybe, definitely  
16 don't know, or depends on political process.

17 A. This is with respect to the nuclear  
18 option?

19 Q. Yes.

20 A. We are not seeking any approvals for  
21 a nuclear option through this process.

22 Q. So you feel that you would be  
23 required to undergo a full environmental assessment of  
24 the nuclear option if you wish to proceed to nuclear  
25 development?

1                   A. If Ontario Hydro was to identify a  
2     need to seek approval for major supply capacity, and  
3     Ontario Hydro was to identify nuclear as being the  
4     preferred form of major supply capacity, then that  
5     would have to get all the approvals that such a project  
6     would need, which I believe would include approval  
7     under the Environmental Assessment Act.

8                   Q. If we could just turn to document  
9     452, this document generally deals with the issue of  
10    dismissal of approvals for the nuclear option, that is  
11    so, isn't it. I don't think you really need to read  
12    it, but I just want confirmation. In the summary K on  
13    page 4 -- on page 23. I just want confirmation, this  
14    is the document which deals with dismissal of nuclear  
15    approval. This is where it was introduced?

16                  A. Exhibit 452, one of the results that  
17    were being described in that was that there was no  
18    longer a need to seek approval for major supply  
19    options, including nuclear options.

20                  Q. In the 796 Update there is no real  
21    alteration of the position with regard to the status of  
22    nuclear supply approval?

23                  A. That is correct.

24                  Q. Mr. Heintzman cross-questioned at  
25    length on the subject yesterday, and I would just like

1 to ask a question or two, if I may.

2 Both during Panel 9 and during this Panel  
3 11, Mr. Heintzman carried on a similar extensive debate  
4 about the reasons for dismissal of nuclear approvals.  
5 The debate generally culminated in Ontario Hydro, some  
6 Ontario Hydro panel member, stating that the reason was  
7 in part due to the government moratorium.

8 A. We did indicate on Panel 10 a number  
9 of reasons for our withdrawing the request for nuclear  
10 approvals and indications of government policy was one  
11 reason but not the main reason.

12 Q. Not the main reason. If there was  
13 not a government moratorium but the other reasons  
14 remained to be placed, would you here and now, in  
15 document 796, be asking for nuclear approval?

16 A. That's very difficult to answer  
17 because there has been a nuclear moratorium now for  
18 well over a year and that requires sort of a  
19 speculation as to what would you have done if something  
20 hadn't happened. I think there is a good chance that  
21 we wouldn't have a nuclear approval now, but I couldn't  
22 be specific as to whether in fact that would be the  
23 case or not.

24 Q. You said to Mr. Heintzman all things  
25 being equal between hydraulic and nuclear, you might be



1 applying for nuclear approval now.

2 A. I'm sorry, I don't recall that  
3 specific piece of cross-examination. It doesn't sort  
4 of ring as something that I would likely say.

5 Q. Surely just the all things being  
6 equal you were discussing.

7 Could you mention other factors causing  
8 inequality between nuclear and hydraulic in the current  
9 circumstances, that are standing in the way of such a  
10 request?

11 A. I don't think anything has changed  
12 since Panels 6, 9 and 10, or since Panel 10 in  
13 particular, with respect to the comparison of nuclear  
14 options and hydroelectric options.

15 Q. So I can find the reasons then.

16 Could Ontario Hydro afford in terms of  
17 cost and funding to request a nuclear approval at this  
18 time?

19 A. That is a difficult question because  
20 in the current situation where the load has been less  
21 than we have forecast, then maybe we couldn't afford it  
22 or we would choose -- we have chosen not to proceed  
23 with that because we don't need it.

24 Now, if the load were so high that we  
25 needed to have a nuclear approval, then maybe our

1 finances would be better and we could afford it. I  
2 don't know. It gets pretty complicated.

3 Q. At some time during the full approval  
4 process, does the company, Ontario Hydro, require to  
5 demonstrate that it has the funds to carry through with  
6 an application? And I don't mean just the  
7 environmental approvals, I know there is a complicated  
8 further approvals process for licensing.

9 A. Before we can proceed with the  
10 project, we do require approval of our board of  
11 directors and Order in Council from the government, and  
12 before we borrow mean we do require Order in Council  
13 from government. And clearly both of those bodies have  
14 some share and responsibility for ensuring that  
15 decisions that are made are financially responsible,  
16 particularly the Ontario Hydro board of directors.

17 Q. There has been discussion during this  
18 Panel 11 about comparative fuel costs. The fluctuation  
19 between natural gas and Ontario Hydro rates have  
20 broadened since 1988, I think it has been stated; is  
21 that so?

22 A. The gap has widened, yes.

23 Q. In favour of natural gas being much  
24 lower.

25 The reason for Ontario Hydro's rate

1 increase and for the present deferrals in 796 have been  
2 explained largely as due to bleak economic times; is  
3 that not so?

4 A. They are certainly a factor, and I  
5 believe in a previous cross-examination it was pointed  
6 out that some of the increase in rates is due to the  
7 Darlington costs, and that was discussed.

8 Q. I was going to say surely the natural  
9 gas industry has been subject to the same external  
10 pressures and hence some of the difference in rates are  
11 due to Darlington, which you have answered my question.  
12 Thank you.

13 Is there truth in the statement that  
14 Ontario Hydro cannot currently afford new nuclear  
15 plants because their old plants have landed them in  
16 economic difficulties, or as people say, the bank has  
17 gone dry?

18 A. I think we have agreed previously  
19 that the situation of nuclear performance is one of the  
20 factors affecting the pressure on rates. It's not  
21 particularly an increased factor since Panel 10, but it  
22 was definitely a factor even before Panel 10 and is  
23 still a factor.

24 Q. I would decist from getting involved  
25 in the carbon dioxide cycle at the moment, but this

1 Update, 796, does address the problem and I heard Mr.  
2 Heintzman thrashing it out yesterday or the day before.

3 In my submission, the issue of the  
4 contribution of the nuclear option to carbon dioxide  
5 control is a tired, old hobby horse which has been  
6 flogged once too often by the nuclear lobby. It's  
7 contribution has been exaggerated out of all  
8 proportion. Would you agree with that?

9 A. Well, I don't think I can comment on  
10 the nuclear lobby but --

11 Q. Just comment on, it's contribution  
12 has been exaggerated out of all proportion. I'm sorry.

13 A. The nuclear options produce  
14 electricity without producing carbon dioxide directly,  
15 and consequencely if nuclear is used instead of some  
16 option that would produce carbon dioxide, then there is  
17 a reduction in carbon dioxide. We have given figures  
18 in our evidence of the magnitude of that effect and  
19 those are the figures that we stand behind.

20 Q. We are not talking here about a hole  
21 in the ozone layer or effects of acid rain, phenomena  
22 which have been verified. The greenhouse effect or  
23 global warming is an unverified hypothetical model.  
24 It's challenged by an opposing hypothetical model that  
25 suggests that blanketing gases could lead to global

1       cooling; is that not so?

2                   A. I am not an expert in this area, so I  
3       couldn't comment.

4                   Q. I am not advocating that we should  
5       ignore the hypothesis, all warnings must be regarded.  
6       Obviously, if we damage the carbon dioxide lungs of the  
7       world, the situation within oceans and global forests  
8       are in trouble, however, we are talking of an active  
9       cycle and a global problem.

10                  Do you acknowledge that the remedial  
11       contribution to the problem by several CANDU fossil  
12       replacements is exceedingly and ineffectively small?

13                  A. Well, I can only address it from an  
14       Ontario Hydro perspective, and that is that Ontario  
15       Hydro, through its operations, does consume fossil  
16       fuels that produce carbon dioxide when they are burned,  
17       and that if we are required to make a contribution to  
18       reducing carbon dioxide emissions, then there are a  
19       variety of options that are available to us, including  
20       switching from higher carbon fuels like coal to lower  
21       carbon fuels like gas, including pursuing more demand  
22       management options, and one of the options that does  
23       produce electricity without producing carbon dioxide is  
24       nuclear.

25                  Q. Yes, but it is the contribution of



1       this remedy to the global effect which is I think  
2       over-rated.

3                       Regarding the emphasis placed on fossil  
4       emissions in this document 796, I am convinced that the  
5       the fossil general distribution to the acid rain  
6       problem is large, therefore, I am of the opinion that  
7       control of acid gas emissions should be mandatory for  
8       abatement technology.

9                       The deferral of emission control  
10      technology in 796 is only advocated on a temporary  
11      measure; is that not so?

12                      A. Well, the deferral that is discussed  
13      in Exhibit 796 is really the largest amount of deferral  
14      that would likely be implemented. As we have said,  
15      that is something which is not settled within the  
16      corporation, that there is a process going on to review  
17      that decision to consider whether some of those  
18      controls should go ahead on the original schedule or  
19      perhaps deferred to a lesser extent than shown in  
20      Exhibit 796.

21                      Q. Are you saying that the long-term  
22      philosophy outlined in 452 with respect to control of  
23      fossil acid gas emissions could be altered, the  
24      long-term philosophy?

25                      A. The philosophy with respect to acid

1 gas control, the control of fossil emissions, is under  
2 review.

3 Q. Undoubtedly Ontario Hydro and the  
4 energy industry in general has a problem with acid gas  
5 emissions and a responsibility, but I don't see why  
6 Ontario Hydro should shoulder the main burden of the  
7 carbon dioxide emissions when it is out of proportion  
8 to the production. Do you think it is because the  
9 problem can be presented in such a light that it  
10 favours nuclear, is that why Ontario Hydro is involved  
11 to a disproportionate extent?

12 A. I am not quite sure in what sense you  
13 believe we are involved to a disproportionate extent.

14 Q. Well, if Canada is serious about  
15 contributing to carbon dioxide control, there are  
16 Canadian remedies which could be initiated at less cost  
17 to safety and environmental concern, and which would  
18 contribute far more to the control of the cycle,  
19 measures such as automobile pollution control,  
20 forestation, and various forms of efficiency; is this  
21 not so?

22 A. Well, there are undoubtedly a variety  
23 of strategies that Canada can adopt to reduce its  
24 carbon dioxide emissions.

25 We have not taken the position that we

1 have a carbon dioxide limit that we cannot go beyond.

2 The position on carbon dioxide was discussed by Ms.

3 Howes on Panel 10 and has not changed since then.

4 We have shown what our carbon dioxide  
5 emissions are with a variety of scenarios, we have  
6 shown a possible or potential limit in the long-term,  
7 but it isn't a binding factor in our planning at this  
8 time.

9 Q. In Exhibit 796 you state that a  
10 comprehensive environmental impact analysis is not  
11 presented in this document, nevertheless you do refer  
12 to economic ranking and environmental leadership  
13 considerations.

14 Do you consider that you have an  
15 obligation to present a fair appraisal of comparative  
16 aspects of competing options where this arises in the  
17 document and during direct evidence?

18 A. Through this hearing we have given a  
19 lot of environmental characteristics of the various  
20 options, and I think you have to read Exhibit 796 in  
21 conjunction with all the materials that preceded it.

22 Q. Mr. Snelson, I just wonder whether  
23 you consider that you have an obligation to present a  
24 fair appraisal when there is competition between  
25 options.

1 THE CHAIRMAN: I think he answered that  
2 by saying that that is what they think they have done.

3 MRS. DeQUEHEN: Q. When there is  
4 consideration of two competing options, for example  
5 fossil and nuclear, by emphasizing the negative aspects  
6 of one option page after page, while the negative  
7 aspects of the other option are completely ignored, as  
8 has been done in the review for 796 and during the  
9 direct evidence, Panel 11, would you say that this  
10 constitutes a failure to have made a fair appraisal?

11 THE CHAIRMAN: That is a very  
12 argumentative question. What you are saying is that  
13 that they have favoured one option by putting its  
14 positive effects, against another option by putting in  
15 its negative effects, but I don't think they can answer  
16 that question. They think they have put their position  
17 fairly, I am sure.

18 I am not quite sure what you mean by  
19 that. If you have specific things that you think they  
20 have done that illustrate that, then you can ask them  
21 that.

22 MRS. DeQUEHEN: Q. If we could just have  
23 a look at 796. The first document is the review,  
24 attachment A and attachment B are the Board memos. Now  
25 in attachment A, small one, four, first sheet, point 4,

1 life management and mothballing of Bruce is mentioned.  
2 In attachment B costs of nuclear are discussed in  
3 business planning, on page 5 mothballing Bruce is again  
4 mentioned. On page 19 nuclear performance is  
5 mentioned. If we could just move to page 19.

6 THE CHAIRMAN: If you are saying that  
7 there is a reference to nuclear, existing nuclear  
8 capacity in these documents, that is correct, and there  
9 is also reference to all the other existing facilities  
10 as well. I don't quite see what point you are making.

11 MRS. DeQUEHEN: The point I am making is  
12 this: That there are matters of concern in these memos  
13 with regard to nuclear. However, in the review and in  
14 direct evidence these matters which would have been of  
15 great interest to intervenors and people who read the  
16 documents, were never mentioned. Nothing was  
17 mentioned.

18 [4:10 p.m.]

19 THE CHAIRMAN: Hold it now. You are  
20 saying that in 796 there are matters of concern  
21 mentioned which have not been mentioned in the  
22 evidence? Is that what you are saying?

23 MRS. DeQUEHEN: I'm saying in the Board  
24 memos.

25 THE CHAIRMAN: No. But in 796 and all



1 the attachments there are matters of concern mentioned  
2 with respect to nuclear which haven't been addressed by  
3 this evidence; is that --

4 MRS. DeQUEHEN: In the direct evidence,  
5 yes.

6 THE CHAIRMAN: All right. Can you give  
7 me an example of that?

8 MRS. DeQUEHEN: I can give you an example  
9 of that. The mothballing of Bruce.

10 THE CHAIRMAN: All right. That's been  
11 mentioned in the direct evidence many times and in the  
12 cross examination.

13 MRS. DeQUEHEN: It has been mentioned in  
14 the cross-examination.

15 Q. But, Mr. Snelson, I don't believe  
16 that was mentioned in the direct evidence which Ontario  
17 Hydro put.

18 MR. SNELSON: A. I believe it was  
19 mentioned in the direct evidence.

20 THE CHAIRMAN: I think it was mentioned.

21 MRS. DeQUEHEN: Nuclear performance on  
22 page 19.

23 THE CHAIRMAN: There has been a lot of  
24 evidence about nuclear performance in this Panel 11 as  
25 well. I am not quite sure what you are getting at,

1 Mrs. DeQuehen, with respect to this. It has a  
2 significant nuclear capacity at the present time and  
3 the existence of that capacity is a matter of  
4 continuing interest.

5 MRS. DeQUEHEN: Yes. I just think that  
6 they should have treated it in a fair and like-minded  
7 manner.

8 THE CHAIRMAN: If you think they didn't,  
9 that of course is your opinion to which you are  
10 entitled to, but that is something that you can deal  
11 with when you make your presentation later on.

12 MRS. DeQUEHEN: Well, I will have to make  
13 my case later on then.

14 I would just like to ask this question.

15 Q. Do you believe, perhaps, that as a  
16 prerogative of Ontario Hydro as proponents to present  
17 evidence in whatever manner they may choose, and if  
18 Ontario Hydro favours the nuclear option, they have a  
19 right to present it in a favourable light and are not  
20 required to present a fair and accurate appraisal?

21 MR. B. CAMPBELL: It is our position, Mr.  
22 Chairman, that it is our responsibility to call our  
23 case before you. And I think it is abundantly clear  
24 that we have done so in a fair and comprehensive  
25 manner.

1 THE CHAIRMAN: I suppose I have to say  
2 that's also an opinion. [Laughter]

3 But evidence is evidence, Mrs. DeQuehen,  
4 and these witnesses have all undertaken before this  
5 panel to give their evidence in a truthful manner.

6 MRS. DeQUEHEN: Mr. Chairman, I wasn't  
7 implying it was untruthful; I was saying that it was  
8 presented -- were presenting nuclear with favour, which  
9 is something else.

10 THE CHAIRMAN: Well, that may be. I  
11 wouldn't comment on that myself. But they have to give  
12 their evidence as they see fit.

13 MRS. DeQUEHEN: Q. All I'm trying to  
14 find out is if they feel they have an obligation to be  
15 impartial in presenting their evidence with regard to  
16 competing options, major supply options.

17 THE CHAIRMAN: I don't think they have an  
18 obligation to be impartial.

19 MRS. DeQUEHEN: They don't?

20 THE CHAIRMAN: They are here to give  
21 evidence on behalf of their corporation as they see it  
22 should be given.

23 We have the obligation to be impartial;  
24 that is, the three of us.

25 MRS. DeQUEHEN: I just have one more

1 question because I have to rush and catch the train.

2 If I could just quickly....

3 Q. This is the dilemma. If Ontario  
4 Hydro in its appraisals of the plan when making public  
5 presentation appears to lack fairness and impartiality,  
6 and appears to be openly prejudiced in favour of an  
7 option, how then are we, the public, to view with  
8 confidence all the multitude of judgmental decisions,  
9 opinions, assessments, assumptions, choices of model,  
10 choices of criteria, variables, et cetera, et cetera,  
11 which go into the representation of claims in radio-  
12 biology and regulation, et cetera?

13 How can you expect the public to have  
14 confidence in such a process when the representative of  
15 an industry believes or appears to demonstrate that it  
16 is their prerogative to be prejudiced in favour of  
17 technology rather than impartial?

18 THE CHAIRMAN: I think that may express  
19 your views but I don't think it's a question that I  
20 will ask the panel to answer unless they want to.

21 MRS. DeQUEHEN: Well, it is a dilemma  
22 which we are faced with.

23 THE CHAIRMAN: Undoubtedly --

24 MRS. DeQUEHEN: We are forced to trust  
25 their numbers, the impartiality, the assumptions behind

1 everything they present. Unless we can be assured that  
2 they are completely impartial, we cannot accept it.

3 MR. B. CAMPBELL: Well, I will wade into  
4 these waters. I believe and it will be our position  
5 that the evidence has been presented in an impartial  
6 and fair-minded manner; and in order to have that  
7 proposition tested, there has been over \$20 million of  
8 intervenor funding provided to test each and every one  
9 of these assumptions. And, overall, I can't imagine a  
10 process that one could put in place that could possibly  
11 conceive of resulting in a more impartial result. So  
12 that's our position on the matter.

13 MRS. DeQUEHEN: Thank you, Mr. Chairman.

14 THE CHAIRMAN: Thank you.

15 MRS. DeQUEHEN: Thank you, panel.

16 THE CHAIRMAN: Thank you, Mrs. DeQuehen.

17 Mr. Watson, you have some questions?

18 MR. R. WATSON: Thank you, Mr. Chairman,  
19 I will be very brief. I have one area that deals with  
20 the \$700 in administrative costs that came to light  
21 during the cross-examination of this panel.

22 To put it into perspective, Mr. Chairman,  
23 the MEA is somewhat concerned about the amount of this  
24 number. We feel we have a good understanding of the  
25 savings that Hydro is talking about in their DSM



1 programs but we are concerned about the costs  
2 underlying the programs, and that's what I'm going to  
3 try and get to and quite quickly.

4 FURTHER CROSS-EXAMINATION BY MR. R. WATSON:

5 Q. Panel, the figure that you referred  
6 to during your cross-examination I believe by Mr. Poch  
7 was a \$700 figure for administrative costs for DSM  
8 programs, and that figure prior to this was \$350; isn't  
9 that correct?

10 MR. SHALABY: A. Yes.

11 Q. And Mr. Shalaby or Mr. Burke, I would  
12 like you to refer to Exhibit 76.

13 MR. BURKE: A. I have Exhibit 76.

14 Q. And there are three tables in that  
15 exhibit, Mr. Burke. There is a table for the  
16 evaluation of EEI technologies in the residential  
17 sector at page 31; the commercial sector at page 41;  
18 and the industrial sector at page 53.

19 You will see that those tables have a  
20 number of columns in there, one of which is life cycle  
21 costs which include administrative costs?

22 A. Yes.

23 Q. Now, Mr. Burke, was the prior figure,  
24 the \$350 figure used to calculate the life cycle costs  
25 in these three tables in Exhibit 76?

1                   A. Actually a bit of a refinement on  
2   what Mr. Shalaby said, and I believe which evidence was  
3   included in Panel 4, was that the residential sector  
4   administration cost was based on 20 per cent of the  
5   premium capital cost; whereas for the commercial and  
6   industrial sectors, the \$350 per kilowatt  
7   administration cost figure was used. I believe that  
8   was all discussed in Panel 4.

9                   Q. Okay. You said residential was 20  
10   per cent?

11                  A. Of the premium capital cost.

12                  Q. Capital costs. And the other two  
13   sectors were 350?

14                  A. Yes.

15                  Q. Mr. Burke, if the \$350 figure was  
16   used in the commercial and the industrial sectors, then  
17   I have a question with respect to the other document  
18   that gave us some information on DSM costs, the  
19   document that is referred to as the PCRD. You are  
20   familiar with that, I'm sure.

21                  A. Well, I'm not too familiar with it  
22   because it refers to the programs. And all of what is  
23   discussed in Exhibit 76 and is used in the load  
24   forecast, it relates to potential for technologies and  
25   specific end uses, and program evaluations, as we have

1 said many times, are done on a program-specific basis  
2 in energy management branch.

3 Q. My question, sir, is: If you had  
4 specific information at the PCRD program level, why  
5 weren't you using that information? Why are you using  
6 a more global figure of \$350?

7 A. I think we have gone over this ground  
8 quite often. Beyond the five-year horizon, it was  
9 assumed that programs -- we did not specify which  
10 programs would be used to deliver the megawatts. And  
11 so that we were using generic estimates of the  
12 administration cost at a time when programs were not  
13 specified.

14 To use the information in the PCRD would  
15 imply that we were continuing the use of programs in  
16 some segments and so on. We were not making these  
17 assumptions. We were simply using the information in  
18 the load forecast to indicate the potential for  
19 efficiency improvement, and applying the administration  
20 cost in a generic way to the particular end uses where  
21 that potential was identified.

22 Q. Mr. Burke, you have indicated that  
23 that \$350 figure was used in two of the sectors. In  
24 addition to administrative costs, we know that there  
25 are other costs associated with programs. In looking

1 at the tables in Exhibit 76, can you provide me or  
2 direct me to or give me an undertaking to produce the  
3 numbers used for these other costs?

4 MR. B. CAMPBELL: Wait a minute.

5 Mr. Chairman, my friend said he had a few  
6 questions about the \$700 figure. Recross-examination  
7 is not an opportunity, in my submission, to go back  
8 into new items that could have been dealt with in his  
9 original cross-examination on this panel. And if he  
10 had tried to ask these questions on the original  
11 cross-examination, I would have said Exhibit 76 was  
12 gone into thoroughly in Panel 4.

13 I think we are a long way beyond what my  
14 friend should be permitted to do at this point in this  
15 panel's appearance.

16 MR. R. WATSON: Mr. Chairman, the \$700  
17 figure came as a great surprise to my client. The fact  
18 that it is so high is something that I would suggest by  
19 itself is enough to warrant an investigation as to how  
20 it came about.

21 And the only way to really understand how  
22 that came about is to understand the genesis of its  
23 predecessor: the \$350 figure.

24 Now, this is not something that I suggest  
25 we need to take our time with right now. The question

1 very simply is: We have looked at the three tables in  
2 Exhibit 76. We know what the basis is for one of the  
3 components of the life cycle cost; that is the  
4 administrative cost. There are other components to  
5 that life cycle cost. My client needs to know what  
6 those numbers are behind that table.

7 THE CHAIRMAN: Is my recollection wrong,  
8 isn't there already an undertaking somewhere in this --

9 MR. B. CAMPBELL: Absolutely.

10 THE CHAIRMAN: About how this figure, how  
11 this 350 and 700 figures were --

12 MR. B. CAMPBELL: The 350, Mr. Chairman,  
13 has all been covered in previous testimony and there is  
14 an undertaking to explain the derivation of the \$700  
15 figure and the caveats that are attached to its use  
16 because there are some important caveats attached to  
17 that, as you heard from Mr. Shalaby. We already have  
18 an undertaking on that.

19 THE CHAIRMAN: But the only caveat I can  
20 remember is that Mr. Shalaby said he wasn't too  
21 comfortable with it, and it looks as if he is going to  
22 be considering it again. Mr. Burke said that it had  
23 limited significance in changing the forecast.

24 MR. B. CAMPBELL: Yes. And I think you  
25 will find that Mr. Shalaby, Mr. Chairman, also



1 indicated in response to Mr. Heintzman that he did  
2 have -- that the use of the number was for a limited  
3 purpose and he would not want to see it extended. I  
4 think that's in the transcript. I don't want to repeat  
5 it now.

6 THE CHAIRMAN: Is this a great problem?  
7 The way that they arrive at the \$350 shouldn't be a  
8 mystery. It may not have been explicit in 76, and I  
9 guess that is the problem Mr. Watson is having. Why  
10 can't we get that information and everyone will know  
11 where it is?

12 MR. B. CAMPBELL: As I understand Mr.  
13 Watson's question, it is not to do, anything to do with  
14 the 350. He wants to go into it now beyond the 350 and  
15 into all of the other costs which contribute to demand  
16 managment costs, as I understand it, a matter which was  
17 been covered in detail in earlier panels.

18 MR. R. WATSON: Mr. Chairman, the  
19 proposition is very simple. We thought we had an  
20 understanding on where we were with Hydro DSM costs.  
21 We were quite shocked to see that a figure that we  
22 thought we understood had doubled.

23 We go back to try and understand where  
24 these costs are coming from and the fundamental  
25 document is Exhibit 76, and these three tables, talking

1 about the evaluation of EEI technologies for the three  
2 sectors, are very important.

3 We now know that one of the figures, that  
4 is the administrative figure in the life cycle cost,  
5 has increased by 100 per cent and there was no mention  
6 of that in Exhibit 796. What we need to find out so  
7 that we can understand the DSM program and its cost is  
8 what are the components of that life cycle cost, what  
9 are they now, and have they changed?

10 THE CHAIRMAN: Wasn't this all in Panel  
11 4?

12 MR. R. WATSON: Well, if Mr. Burke's  
13 evidence is that the life cycle costs are exactly as  
14 they were in Panel 4, except for the change in  
15 administration from 350 to 700, I'm content with that.

16 Q. Is that your evidence, Mr. Burke?

17 MR. BURKE: A. I think I have suggested  
18 that we were going to produce as part of the  
19 forthcoming material a document which corresponds to  
20 Exhibit 76 for this load forecast, which will therefore  
21 include tables like in appendix A-3 which give the  
22 premium capital costs of the measures, and you will  
23 have as much information as we have about the cost of  
24 the individual measures..

25 MR. R. WATSON: Mr. Chairman, that's the

1 issue. I'm sure --

2 MR. B. CAMPBELL: Mr. Chairman, Mr.  
3 Watson --

4 MR. R. WATSON: If I could finish, Mr.  
5 Campbell.

6 THE CHAIRMAN: Let Mr. Watson finish.

7 MR. R. WATSON: Mr. Campbell and Mr.  
8 Burke are talking about producing this table. That's  
9 fine. What I'm talking about, and I want to be clear  
10 on this, what I'm talking about is the numbers behind  
11 this table. Mr. Burke is going to produce this table.  
12 I understand that. I'm happy that he is going to do  
13 that. I want to be in a position where I can look at  
14 the numbers that are forming these life cycle costs; in  
15 other words, the back-up for these numbers.

16 Now I understood Mr. Burke to say he was  
17 going to reproduce this table. If he is going to give  
18 me the numbers behind that that allow me to calculate  
19 those numbers and verify those numbers, I'm content.

20 THE CHAIRMAN: I have three problems  
21 here: one, I don't have Exhibit 76; two, it's  
22 four-thirty; and three, I can't remember precisely what  
23 went on in Panel 4.

24 But this was an area which could have  
25 been explored in Panel 4. What you are saying, if I

1 understand are you correctly, is that you were  
2 intending to accept the figures that were given in that  
3 table and now when you find that they are subject to  
4 such wide variations like a hundred per cent, that  
5 troubles you and therefore you want to explore this  
6 area more thoroughly. Is that --

7 MR. R. WATSON: That's it in a nutshell,  
8 Mr. Chairman. We had no idea that 350 was going to  
9 change to 700. It wasn't in 796.

10 THE CHAIRMAN: All right. So you want  
11 the back-up figures for --

12 MR. R. WATSON: For those three tables.

13 THE CHAIRMAN: Yes, back into 76.

14 And Mr. Burke has told us, I forgot to  
15 mention that, that there is going to be - to use Mr.  
16 Shalaby's words - a son of Exhibit 76 is coming out  
17 fairly soon.

18 [4:30 p.m.]

19 I guess in that context - Mr. Campbell is  
20 on his feet, I guess I should listen to him - I was  
21 going to ask Mr. Burke, is this a problem, and if it  
22 isn't, we can deal with it; if it is, we will have to  
23 think about it.

24 Now is there a problem?

25 MR. BURKE: My reaction to Mr. Watson's

1 question is somewhat surprised, I am somewhat surprised  
2 in the sense that the issue of what costs are involved  
3 in each of these measures is a very technical, hardware  
4 orientated, how many dollars we estimate things. There  
5 is no other category other than what is estimated to be  
6 the cost of the measure, to which we have then added  
7 administrative costs. That component of administrative  
8 costs we are saying is changing. I don't see how that  
9 brings into question any of the other costs that are  
10 included in table. Those could have been questioned at  
11 any time on Panel 4, through undertakings, whatever,  
12 and were not.

13 We could, but it's a massive job. There  
14 is lots of data lying behind these tables. This a  
15 whole new area as far as I'm concerned, but is not  
16 brought into question by the change in the  
17 administration costs which is totally unrelated in fact  
18 to the hardware that lies behind an R2000 house or a  
19 refrigerator upgrade or whatever. These are completed  
20 unrelated issues.

21 THE CHAIRMAN: I guess the thing that  
22 troubles me and troubles Mr. Watson is, that a jump of  
23 100 per cent in such a short time is a very dramatic  
24 jump, and that may then take one to - and I haven't got  
25 76 in front of me, I haven't thought about this - takes



1 one to wonder about the other figures. I guess that is  
2 the concern.

3 MR. BURKE: I guess my point is I am not  
4 quite sure why in the sense that what we have indicated  
5 is the economics of most of these measures has not  
6 changed, that the addition of the \$350 per kilowatt has  
7 had the effect of changing very little of the screening  
8 that was done with the premium capital cost numbers  
9 that are in these tables.

10 So that I guess it's my understanding  
11 that most of the costs for these technologies have not  
12 changed appreciably at all since Exhibit 76 was  
13 prepared. But the component as we have said for  
14 administration cost was re-estimated based on the  
15 experience of programs to date and the total cost to  
16 date divided by the total impact to date was the source  
17 of this estimate which both Mr. Shalaby and myself have  
18 suggested we have troubles with. Neither of us were  
19 responsible for those estimates and we are  
20 reconsidering it, but we don't consider it a material  
21 issue because it has not had the effect of screening  
22 out very much of the demand management program.

23 MR. R. WATSON: Mr. Chairman, my request  
24 remains. I am in your hands. You summarized very  
25 succinctly what my concern was. Mr. Burke's response

1 to that was I shouldn't be concerned. I can tell you  
2 that I remain concerned. I am in your hands.

3 THE CHAIRMAN: We haven't heard Mr.  
4 Campbell. Mr. Campbell has still got an opportunity to  
5 respond.

6 MR. B. CAMPBELL: Well, we have  
7 undertaken -- my friend has apparently forgotten that  
8 he has a whole set of interrogatories here, that I met  
9 with him over the last two days and we have agreed to,  
10 one of which is the new version of Exhibit 76 that Mr.  
11 Burke has spoken of on several times. We are quite  
12 prepared to provide that. And if my friend looks at  
13 the other costs that are unrelated to the \$350 in the  
14 new Exhibit 76 and sees dramatic differences, then I am  
15 quite prepared to sit down with his consultants, have  
16 our people sit down with his consultants and tell them  
17 where those differences come out.

18 With respect to the \$700, which was the  
19 issue which he came back to in this matter, we have  
20 undertaken to provide him with a full explanation of  
21 the derivation of that figure and the limitations of  
22 its use. That's an outstanding interrogatory, and in  
23 my submissions that ought to be more than adequate for  
24 my friend's purposes.

25 Also, there are a variety of other

1 related reports that are being prepared that we have  
2 already agreed to give to my friend, and to answer  
3 certain additional interrogatories which, in my  
4 submission, cover all this area in any event.

5 MR. R. WATSON: Mr. Chairman, what Mr.  
6 Campbell says is true, but I suggest to you it's not  
7 the issue that I am pursuing in front of you right now.

8 THE CHAIRMAN: I realize that.

9 But I think maybe that a curbstone ruling  
10 on this will be that you go along as far as you can  
11 with Mr. Campbell, and if you still have a problem then  
12 you will have to come back to us on this, because Mr.  
13 Burke has told us two things, which of course can be  
14 questioned, one is that it doesn't have a great deal of  
15 significance, and secondly it would be a very big job  
16 to do.

17 I may be paraphrasing Mr. Burke not quite  
18 as as well as he would have said it, but that was the  
19 impression I got.

20 MR. R. WATSON: Thank you, Mr. Chairman.  
21 I will review the information when it comes from Hydro,  
22 as Mr. Campbell suggests, no doubt we will talk to him  
23 and his experts. If we cannot understand things and if  
24 there is a problem, we will come back to you.

25 Q. Mr. Burke, I have one last question.

1 The \$700 screening number, I assume that's not used to  
2 compare the life cycle costs and the avoided costs in  
3 Exhibit 76; is that fair?

4 MR. BURKE: A. Didn't you just ask me  
5 before what we did use in Exhibit 76, or did I just  
6 misunderstand your question?

7 Q. The figure like \$700 or \$350, that  
8 administrative fee, that is not -- and in your update  
9 to Exhibit 76, are you going to use \$700 as the value  
10 when you compare life cycle costs and avoided costs?  
11 Is that your current plan, to use \$700 in the son of  
12 76?

13 A. What I am clear about at this point  
14 is that the total customer cost test as applied by  
15 Ontario Hydro for Exhibit 796 included \$700 per  
16 kilowatt as an administration cost on top of the  
17 premium capital cost of the measures.

18 As I sit here looking at these particular  
19 columns which look like components of the inputs to the  
20 total customer cost test, I am not absolutely sure --  
21 but we will do the same thing that we did in Exhibit  
22 76, that's for sure.

23 The point I am having difficulty with is  
24 knowing which of these two columns -- whether in the  
25 life cycle cost column, the \$700 -- the \$350 number is

1 included in the data there.

2 Q. I thought we were assuming it was,  
3 Mr. Burke.

4 A. Yes. You're right, you're right. It  
5 is in that column and it will continue to be in the  
6 life cycle cost column, yes, the administration cost.

7 THE CHAIRMAN: It says for commercial and  
8 industrial but not for residential.

9 MR. BURKE: Yes, and in the residential  
10 it will be the 20 per cent of the premium capital cost.

11 MR. R. WATSON: Q. So that will be the  
12 same for the son of 76?

13 MR. BURKE: A. Yes.

14 Q. Okay. So residential would be the 20  
15 per cent and industrial and commercial will be 700?

16 A. Well, I think the evolution in the  
17 residential is that for thermal insulation measures we  
18 continue to use the 20 per cent and for all other  
19 measures we are now using the \$700 per kilowatt.

20 MR. R. WATSON: That is fine.

21 MR. BURKE: But that will all be clear in  
22 that document.

23 MR. R. WATSON: I hope so, Mr. Burke.

24 Thank you.

25 Thank you Mr. Chairman.



1 THE CHAIRMAN: Dr. Connell, do you have  
2 any questions?

3 DR. CONNELL: I have I think not more  
4 than five minutes' worth.

5 EXAMINATION BY DR. CONNELL:

6 Q. If I can just refer to 796, page 1,  
7 in the middle of the page the four pressures are  
8 identified. Would it be fair to say, panel, that the  
9 third and fourth of these pressures, the reductions to  
10 the load forecast, the higher rates, the pressure on  
11 rates and costs, these are the two that impinge  
12 directly Hydro's planning and policy, that the first  
13 two are really subsumed in the third and fourth; is  
14 that fair?

15 MR. SNELSON: A. I believe that the  
16 first one is subsumed, in your term, in the later ones.  
17 But declines in load are somewhat different to further  
18 reductions to the load forecast.

19 So I think the way that was intended is  
20 that the declining load is what has happened, and the  
21 reduction to the load forecast is a change in the  
22 expectation of what will happen.

23 Q. Well, if I may then group the second  
24 and third together as the load factors and take the  
25 fourth as the rate factors.

1                   Then if you move on to look at table 1-1,  
2     for example, in your evaluation of the measures under  
3     consideration in 1-1, would you say that both the load  
4     factors and the rate factors came into play in all of  
5     those?

6                   A. Indirectly, yes.

7                   The load factor then in terms of reduced  
8     load is one of the factors causing a forecast of  
9     surplus capacity, which leads you into the situation  
10    where you are trying to consider what options to cancel  
11    or defer to reduce the surplus, and this particular  
12    table addresses the cost aspect as to which of the  
13    options is most cost-effective to defer, and that does  
14    address the rate issue but not directly because this is  
15    in terms of present value costs. There is some  
16    discussion of the rate impacts of individual options in  
17    one of the appendices, but this particular table is in  
18    terms of long-term costs.

19                  Because costs, low costs leads low rates,  
20    then it's indirectly to do with rates but it's not  
21    directly to do with rates.

22                  Q. So if I turn to page 17, just to pick  
23    one of the options as an illustration, this happens to  
24    be the Manitoba purchase and transmission, in the  
25    second part of it under Manitoba Purchase, this cites

1 as one means of helping to manage the capacity surplus.  
2 It doesn't explicitly cite rates here, but I can infer  
3 from your evidence that the impact on rates was also a  
4 consideration.

5 A. Yes, I believe I said that in my  
6 direct evidence.

7 Q. And would it be possible for you in  
8 the case of this particular decision to say whether the  
9 load effect or the rate effect was -- sorry, put it the  
10 other way, the load cause or the rate cause was the  
11 more weighty in addressing the Manitoba purchase?

12 A. I think they are both important. If  
13 you recognize that the load forecast change beyond  
14 about 2005 is not all that great, then I think if you  
15 had to put one in front of the other, then it would be  
16 the rate impact, but the load has had an effect in  
17 direct and indirect ways.

18 Q. Let me just take that one step  
19 further with the hypothetical.

20 Let's imagine that your ratepayers were  
21 such that they were utterly complacent and would endure  
22 whatever rates emerged from your plans as conceived in  
23 452, in those circumstances is it possible that the  
24 decision might have come down differently on the  
25 Manitoba purchase?

1                   A. This is into a hypothetical  
2 situation, it's a very dangerous area.

3                   I think there would have been grounds,  
4 reasonable grounds for taking the decision we took  
5 without the rate pressure. Whether in fact that  
6 decision would have been taken I don't think I can  
7 comment, but there would have been reasonable grounds  
8 to do so.

9                   Q. Yesterday in response to Mr. Mattson,  
10 looking at transcript 181, page 31615, at line 16 you  
11 said:

12                   "We have responded to the higher rate  
13 projection and particularly the  
14 customers' response to higher rate  
15 projection by taking measures to cut  
16 costs in the short run and in the long  
17 run, and we expect that process to  
18 continue."

19 [4:45 p.m.]

20                   Now if I want to look at the impact of  
21 your decisions, both in the short term and the long  
22 term, if I refer back to table 1-1, the present value  
23 table, what you are giving me in the present values are  
24 in fact a blend of short term and long term, depending  
25 on the impact over the lifetime of the item, whenever

1 that happens to be; is that correct?

2 A. Yes, it is, though I think you must  
3 recognize that table 1-1 does look at deferral of  
4 options, so it looks at the difference of the lifetime  
5 costs between, say, installing an option in 1998 and  
6 deferring it to 2008. So, that process of differencing  
7 does actually focus most of the difference on the costs  
8 in those years, but it does have the effect, as you  
9 have indicated, of blending to some degree short-term  
10 and long-term costs.

11 Q. And if I refer you back to page 1 of  
12 796, just at the bottom, this cites table 1-1 and its  
13 use in determining the relative economic ranking of  
14 deferring new options. But the next sentence states:

15 "It does not evaluate the long-term  
16 benefits of an option."

17 It follows then, I think, that if you  
18 made your choices just on the basis of the economic  
19 ranking in table 1-1 that you might then take steps  
20 which were advantageous in the short run but which  
21 might forego the long-term benefits of that option.

22 A. If the decision that is being taken  
23 on 1-1 is the actual action that is discussed or  
24 modelled in 1-1, which is deferral, then by going with  
25 an option in 2008 instead of 1998, then you will still



1 get the long-term benefits.

2 And if that shows as a benefit, that  
3 deferral shows as a benefit on that present value  
4 analysis, then the long-term benefits are higher for  
5 implementing the option at the later date than they are  
6 for implementing the option at the earlier date.

7 Q. But in the case of simply terminating  
8 that option, it would in fact be a matter of simply  
9 foregoing those long-term benefits?

10 A. That is correct. And we have not  
11 addressed through this evidence any analysis that might  
12 have been done.

13 And I did indicate that analysis was done  
14 of the benefits of cancelling the Manitoba Purchase,  
15 and Mr. Campbell indicated that I shouldn't answer  
16 those questions. And that was discussed, I believe, in  
17 front of the Board here.

18 Q. So taking it out of the context of  
19 that decision. But if there were a hypothetical  
20 decision which involved termination, it is possible  
21 then that pressure concerning rates might lead to a  
22 decision which was seen by Hydro and by its customers  
23 as advantageous to the customers in the short run but  
24 yet might be disadvantageous to the customers in the  
25 long run?

1                   A. It is possible that in the  
2 hypothetical case that such things could arise, yes.

3                   DR. CONNELL: Thank you.

4                   THE CHAIRMAN: Is there anyone else who  
5 wishes to ask any questions of this panel before I call  
6 on Mr. Campbell? (No response)

7                   Mr. Campbell.

8                   MR. B. CAMPBELL: Thank you, Mr.  
9 Chairman.

10 RE-DIRECT EXAMINATION MR. B. CAMPBELL:

11                   Q. Mr. Snelson, I think my first  
12 question is for you. You will recall that Mr.  
13 Heintzman entered an Exhibit 1046 which was certain  
14 statements made by Mr. Strong at the Rio Conference  
15 with respect to CO(2) emissions and a variety of other  
16 matters, but he focussed on CO(2) emissions?

17                   MR. SNELSON: A. I recall him filing  
18 such exhibits, yes.

19                   Q. And you have of course spoken several  
20 times about a review of the emissions control strategy  
21 that is under way. Can you confirm that my  
22 recollection of that is correct?

23                   A. There is a review of the emission  
24 control strategy under way, yes.

25                   Q. And would it be your expectation that

1 Mr. Strong's views will be brought to bear on that  
2 review?

3 A. He is the chairman of the company,  
4 and the chairman's views are quite influential in  
5 Ontario Hydro's considerations, yes.

6 Q. All right. Now I want then if you  
7 can dig up 1047, which was another document put to you.  
8 I think it was the Ministry of Energy document dated  
9 September 3, 1992. Looks like this.

10 Now in reading you excerpts from this  
11 document, I was particularly struck -- there is an  
12 attachment to it called "Global Warming Report", and I  
13 was particularly struck by the part that Mr. Heintzman  
14 skipped over in reading to you.

15 And I would ask if you turn to the third  
16 page, just under the map of Canada, beside that is the  
17 part I think that was read to you that pointed out that  
18 the burning of fossil fuels is the dominant  
19 human-induced contributor to the greenhouse effect.  
20 Then the next sentence was left out. Could you read  
21 that please.

22 A. "Improved energy efficiency, greater  
23 use of renewable energy, and the  
24 development of new energy technologies  
25 will all be needed to reduce emissions of

1 CO(2)."

2 Q. And in your judgment is that  
3 consistent with some of the strategies that Ontario  
4 Hydro has adopted in its planning?

5 A. Yes.

6 Q. Now, Mr. Dalziel, could you turn  
7 please to appendix J of Exhibit 796. Have you got  
8 that?

9 MR. DALZIEL: A. Yes.

10 Q. And there there are load and capacity  
11 tables which show major supply options coming into  
12 service in which year?

13 A. Major supply facilities come into  
14 service in the year 2010 in each of the load and  
15 capacity tables. That would be January 2010.

16 Q. Now were those dates, the choice of  
17 those dates being inserted into the capacity, the load  
18 and capacity tables on those dates, the insertion of  
19 those units on the load and capacity tables on those  
20 dates influenced in any way by the dates also shown in  
21 that appendix as the earliest possible in-service dates  
22 for those major supply options?

23 A. Sorry, could you repeat that  
24 question.

25 Q. The major supply options that are

1 shown on those tables have the dates that you have  
2 pointed out; is that right?

3 THE CHAIRMAN: And those are in-service  
4 dates, is that right, that are shown there?

5 MR. DALZIEL: Yes, they are. They are  
6 shown as January, being in-service for January 2010.  
7 That's how they are modelled. You might actually plan  
8 to have them in-service a month or two before the  
9 winter peak, before that January, the October -- in  
10 other words, October of the preceding year.

11 MR. B. CAMPBELL: Q. And those are the  
12 need dates for those options, are they not?

13 MR. DALZIEL: A. Yes, they are.

14 Q. Then were the selection of those need  
15 dates and the insertion of those major supply units in  
16 those tables at those dates influenced in any way by  
17 the dates shown in the notes as the earliest possible  
18 in-service dates for those options which are somewhat  
19 earlier dates?

20 A. I think you are referring to  
21 paragraph 1.6?

22 Q. That's right.

23 A. And paragraph 1.6 is simply stating  
24 what would be the earliest in-services dates for those  
25 various major supply units. But the dates that are



1 reflected in the load and capacity tables are  
2 determined by the need for major supply requirements,  
3 so they are consistent with what is in paragraph 1.6  
4 but they not driven by what is in paragraph 1.6.

5 Q. And in arriving at what is in the  
6 load and capacity balance tables, in arriving at those  
7 particular dates, were they influenced by the earliest  
8 possible in-service dates; that is, other than the fact  
9 that they are later, were they influenced in any  
10 respect?

11 A. I'm sorry, I'm not understanding the  
12 question. (Laughter)

13 Q. You selected --

14 THE CHAIRMAN: Let me see if I understand  
15 it. If, for instance, whatever mechanism is used to  
16 produce A2 came up with 2005, you would still put 2005  
17 in there; in other words, you didn't have in the  
18 mechanism that set this up the warning barrier of 1.6?

19 Does that say the same thing?

20 MR. B. CAMPBELL: No, it does not, Mr.  
21 Chairman, but it illustrates the point I'm trying to  
22 make very well.

23 But maybe I will try again with Mr.  
24 Dalziel.

25 MR. DALZIEL: Thank you. [Laughter.]

1 MR. B. CAMPBELL: Q. You picked dates  
2 for certain major supply units into the tables that are  
3 part of Exhibit J, that is the load and capacity  
4 balance tables, did you not?

5 MR. DALZIEL: A. Yes.

6 Q. On what basis did you pick those  
7 dates?

8 A. The dates in 1.6?

9 Q. No, the dates in the load and  
10 capacity balance tables?

11 A. Well, those dates are picked on the  
12 basis of needing major supply facilities.

13 Q. And that's the only basis on which  
14 they were picked?

15 A. Yes.

16 MR. B. CAMPBELL: Thank you.

17 Thank you, Mr. Chairman.

18 THE CHAIRMAN: Just so I understand it.

19 It's quite possible you could have got  
20 2005 if that happened to be the need date in that  
21 exercise; is that right?

22 MR. DALZIEL: Yes.

23 THE CHAIRMAN: All right.

24 MR. B. CAMPBELL: Well, I'm going to  
25 wade -- this is really silly, but anyway it's five

1 o'clock, what the heck.

2 Q. If an option had an earliest possible  
3 in-service date in 2006 and you looked at the load and  
4 capacity balance and said, just on the basis of need it  
5 was required in 2005, what influence would the 2006  
6 have had on the tables in that circumstance?

7 MR. DALZIEL: A. If the earliest  
8 in-service date of a station was 2006?

9 Q. Yes.

10 A. But you would liked to have it  
11 in-service in 2005?

12 Q. Would there be any point in putting  
13 it in the table any earlier than 2006, knowing that you  
14 couldn't build it by then anyway?

15 A. There would be no point in doing that  
16 and you would turn to other options in order to meet  
17 those needs.

18 MR. B. CAMPBELL: Thank you.

19 [5:00 p.m.]

20 Q. Mr. Dalziel, there is just one other  
21 minor matter. Could you dig up transcript Volume 180  
22 and go to page 31436.

23 A. Yes.

24 Q. Have you got that?

25 At the bottom there is a question to you

1 at about line 22:

2 "QUESTION: Yes. And then there being  
3 major more supply deficiencies in the  
4 system until -- well, thereafter?

5 "ANSWER: Beyond that date this  
6 indicates there is a requirement for new  
7 supply facilities."

8 And it goes on to the next question. I  
9 just want to ask you about that answer. In that event  
10 that there are deficiencies, which I think refers to  
11 that gap between the supply and the load and the  
12 load-meeting capability, are there any other options to  
13 you other than supply facilities available?

14 A. You can always turn to demand  
15 management options as well to see if there are any  
16 additional demand management measures that could be  
17 used to meet those deficiencies.

18 MR. B. CAMPBELL: Thank you.  
19 Thank you, Mr. Chairman, those are my  
20 questions.

21 THE CHAIRMAN: Thank you, panel, for  
22 staying so long today.

23 This completes Panel 11. We will adjourn  
24 now until Tuesday, the 26th of January at 9:00 a.m.,  
25 when we will hear the motion brought by Northwatch, and

1 any other submissions that any party wants to make  
2 about the future of this process.

3 We are adjourned.

4 ---Panel withdraws.

5 THE REGISTRAR: Please come to order.

6 This hearing will adjourn until Tuesday, the 26th of  
7 January, at 9:00 a.m.

8 ---Whereupon the hearing was adjourned at 5:03, to be  
9 resumed on Tuesday, January 26, 1993, at 9:00 a.m.

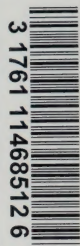
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